ATHLETIC JOURNAL

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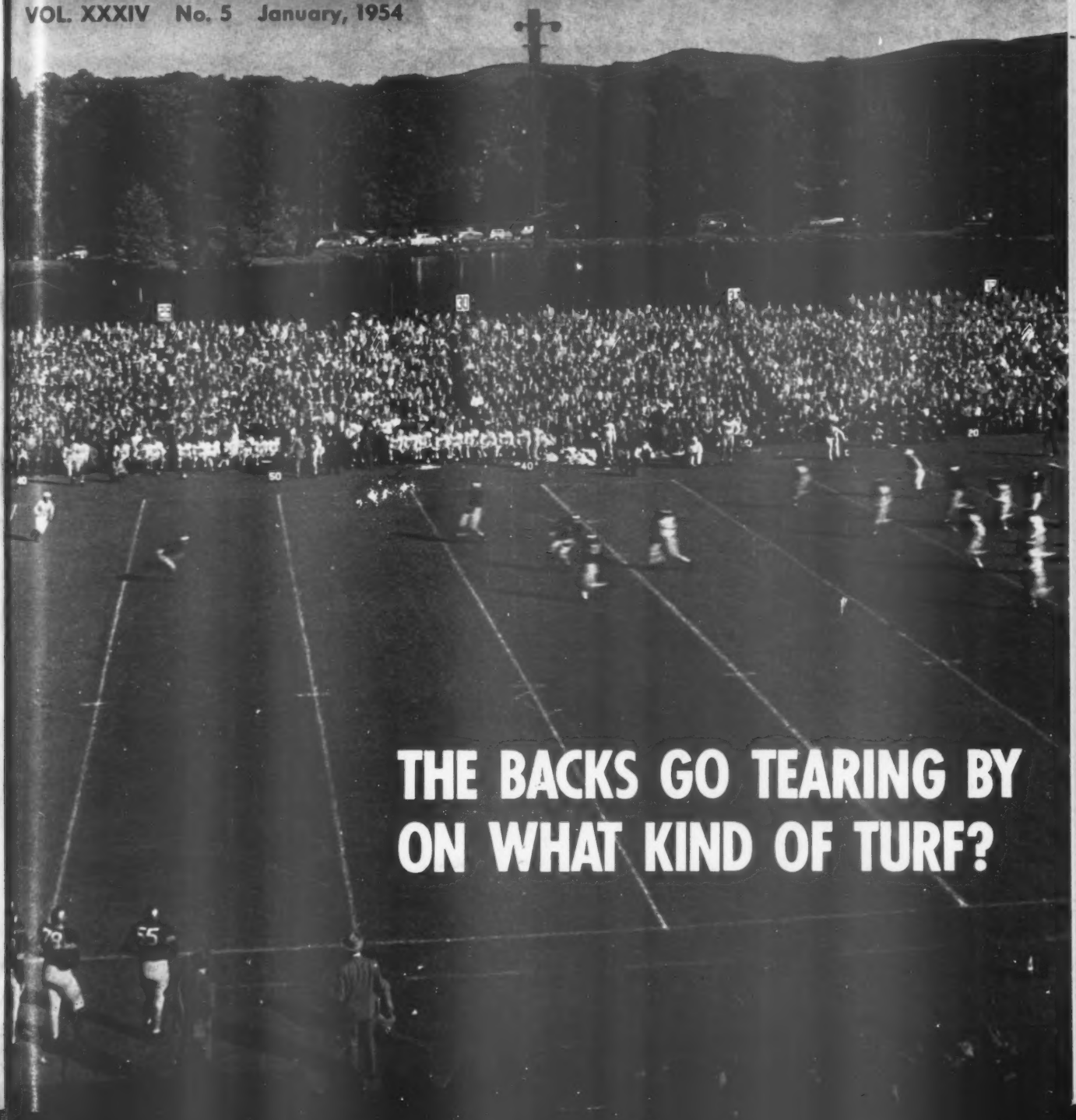

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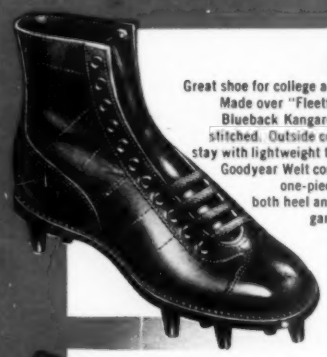

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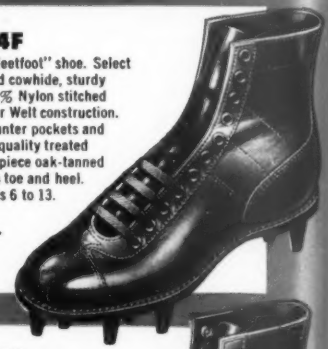

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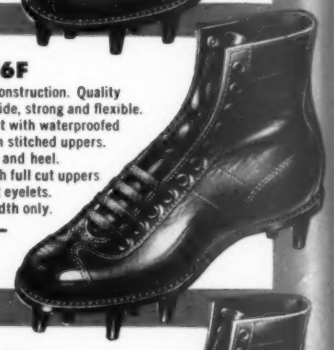

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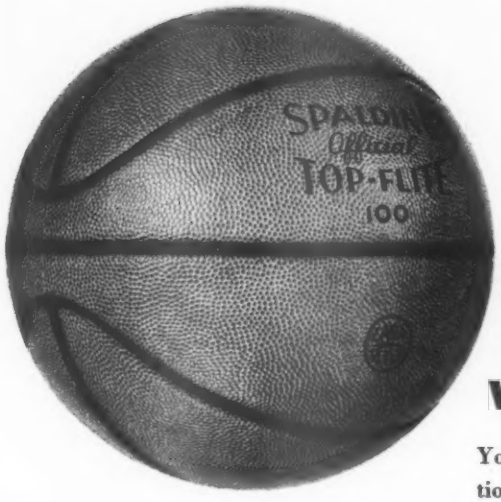

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The ATHLETIC JOURNAL

Nation-Wide Amateur Athletics

Volume XXXIV **Number 5**

January, 1954

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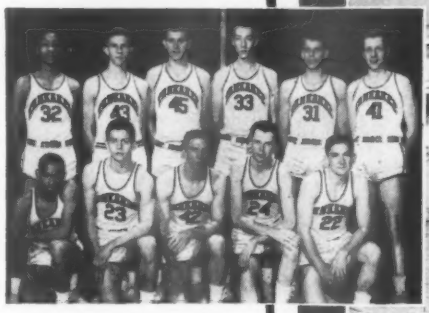
FRONT COVER ILLUSTRATION

"As the Backs Go Tearing By" is a well-known Dartmouth song and appropriately enough the game pictured was the Dartmouth-Army game at West Point. Also, appropriately enough, the Michie Stadium turf at West Point is described on page 16.

to STATE CHAMPIONSHIP PLAY-OFFS on HILLYARD-FINISHED FLOOR



16 wins! No losses! That's the record the basketball squad at Kankakee, Ill., H. S. stacked up before going to State finals. Hillyard-treated gym floor was training center and home floor for an important segment of the year's scheduled games.

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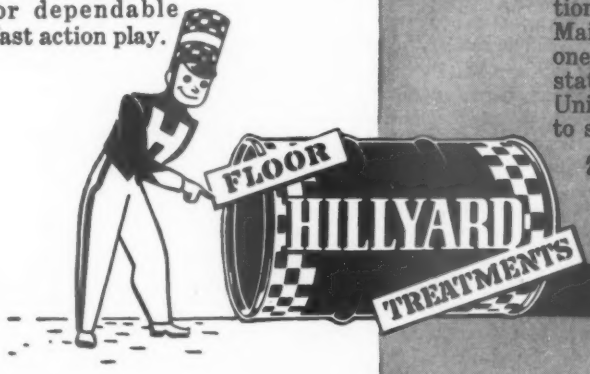

Coach Earl Jones Agrees

with hundreds of other leading High School, College and Professional coaches that the accurate shooting and fast pivoting which makes championship teams would not have been possible without the sure footing provided by a Hillyard non-skid, no-glare gym finish.

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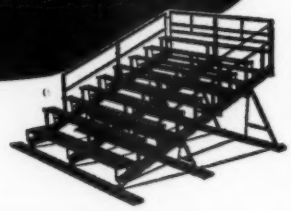

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from here and there

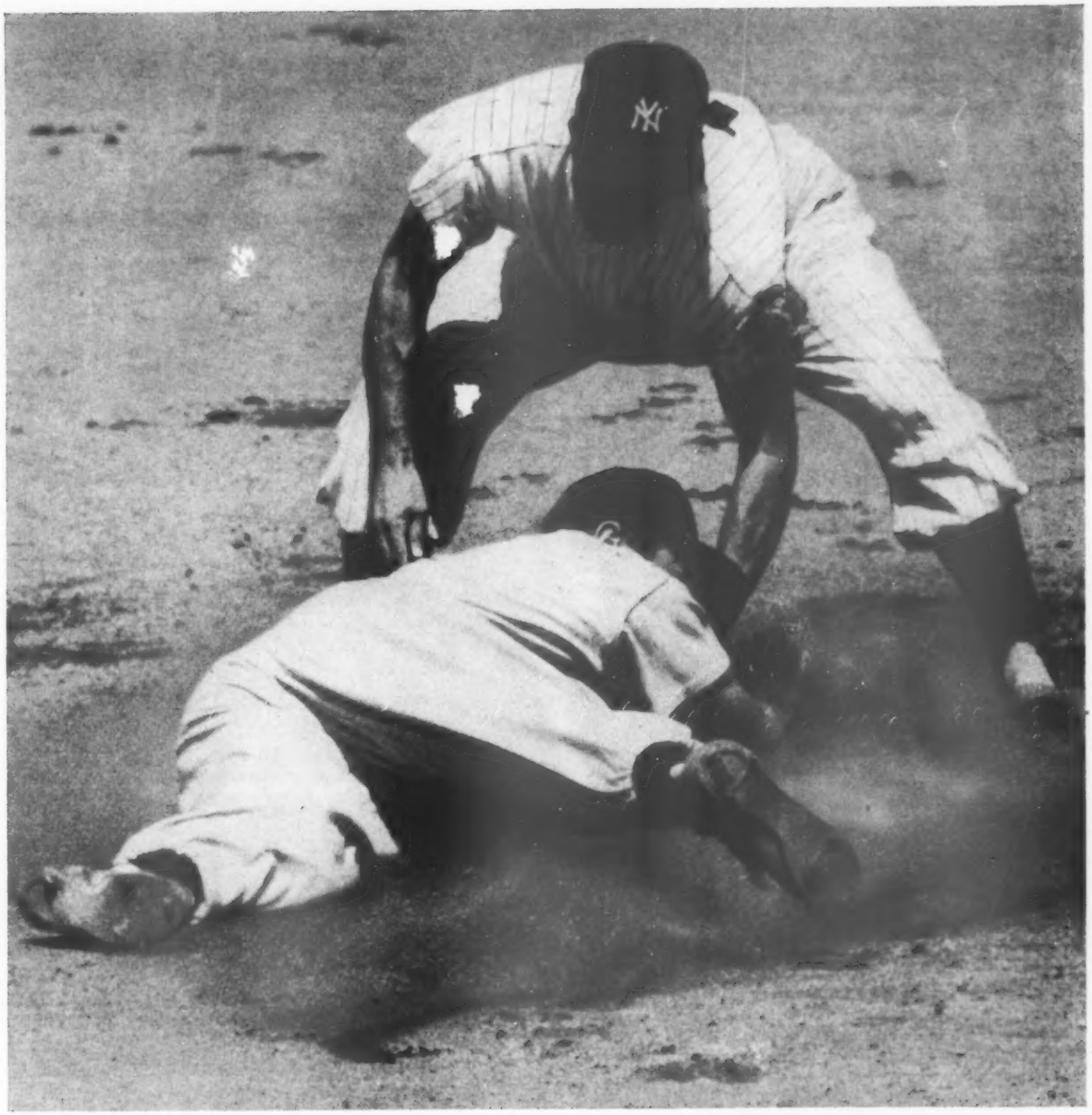
DR. JOHN NANOVSKY conducted an interesting study among Ohio coaches. He points out that 93 per cent were certified to teach health and physical education. Approximately 52 per cent are 30 years of age or younger, and approximately 57 per cent had five or less years of experience. About 84 per cent received compensation for coaching; with 64 per cent receiving less than $500, 17 per cent from $500 to $1000, and 4 per cent $1000 or more . . . When Charles Cummings, now production manager of the American Playground Device Co., was coaching at Anderson, Ind., High School one of his star baseball and basketball players was Carl Erskine of the Brooklyn Dodgers. Cummings guided Anderson, Ind., High School to the state championship in 1946 and his 1944 Anderson team and the 1942 Crawfordsville teams went to the finals . . . If you are inclined to feel that hockey is a rather new sport, you will be as surprised as we were to learn that the Yale-Harvard and Yale-Princeton hockey series date back to 1900 . . . To the usual long table of football statistics, statistical-minded "Pappy" Waldorf also records the manner in which a sequence of downs is terminated. This past season 33 sequences ended in scores and 33 ended in fumbles, with 37 ending in points.

• • •

THE use of the movie camera to study technique and offensive and defensive strategy is nothing new in the field of sports, but the camera manufacturers have overlooked an important new outlet for their products. Bill Geisheker, director of the Marquette band, films the band's halftime activities in order to pick out flaws and make necessary corrections . . . Dee Andros, Kansas assistant coach, recently picked up some cleaning and on arriving home discovered they had failed to give him a pair of pants. On arriving back at the cleaning establishment the owner asked: "How come you guys keep fumbling the ball all the time and losing it?" Andros shot back: "How come you keep losing my pants? They're a lot bigger than that ball." Andros weighs 260 pounds . . . As a follow-up to our presentation of the Giel pictures last month is this little gem. During the month of December when Giel was in New York receiving recognition for some of his numerous All-American selections he was eating at Toots Shor's with a number of sports dignitaries. Yogi Berra turned to Giel and asked: "You gonna play pro baseball?" Giel replied in the affirmative and Yogi asked: "You a right-hander or left-hander," Giel assured him he was a right-hander. Whereupon Yogi grunted: "Good, I get fat on right-handers."

• • •

LITTLE ROCK, Arkansas, High School competed in football this past season with schools from five states. The out-of-state teams on the schedule were: Memphis, Tenn., Baton Rouge, La., Paducah, Ky., and Texarkana, Texas. Also of interest is the fact that four members of the athletic staff at Little Rock coach track or assist in that sport. This may account for the fact that Little Rock has won 135 dual track meets and lost but 16 since 1914. The only man on the staff not working with track candidates is E. F. Quigley, the athletic director . . . It has been said that there is a great deal of difference between coaching high school players and college players. If such is the situation, pity the case of Ed Beacon. He teaches and coaches at Hopkins Grammar School in New Haven and is the freshman coach for Yale . . . Some last-minute changes and appointments. Dr. Fred Grau, the country's foremost turf authority and until recently Director of the Green Section of the U. S. Golf Association, has joined the staff of the West Point Products Corp., and will aid in the development of new products and techniques . . . The R. J. Ederer Co., net manufacturers, was bought by Linen Thread Co., who will operate both companies. Walt Conklin, formerly vice president of Ederer's, purchased the Fish Net and Twine Co. of New Jersey and will move the company to Chicago.



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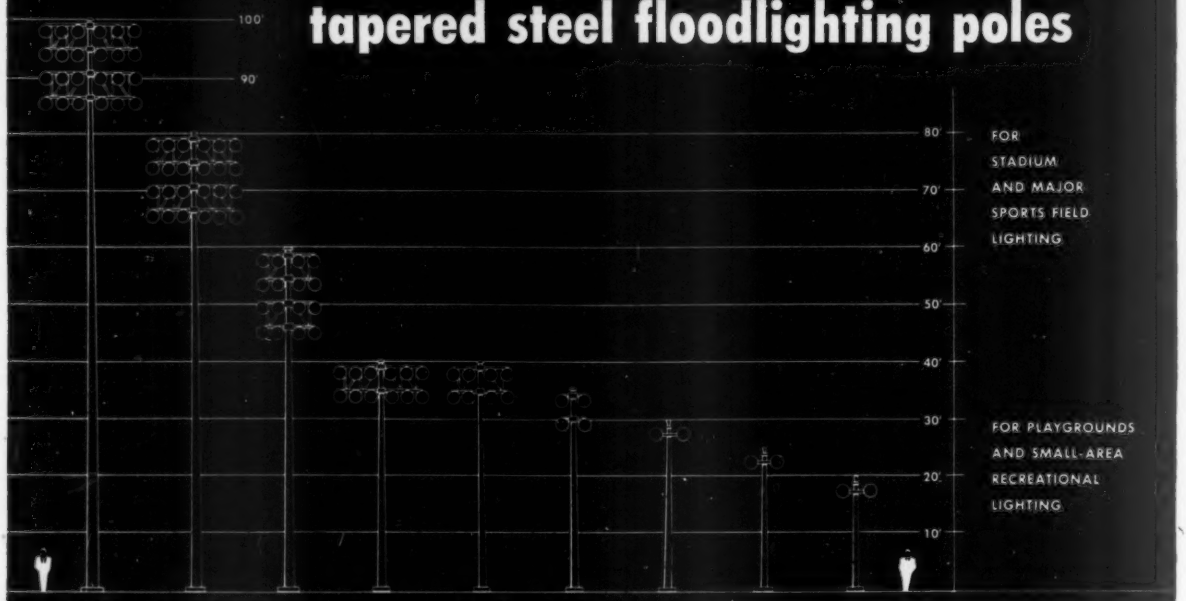

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Typical Monotube stadium installation.

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SEND FOR BULLETIN

The bulletins shown here give facts that shouldn't be overlooked in your planning—Catalog No. 76-A on sports field floodlighting; Bulletin FL-102 on small-area or recreational floodlighting. For either or both, write to The Union Metal Manufacturing Company, Canton 5, Ohio.

Monotubes used in small-area floodlighting.

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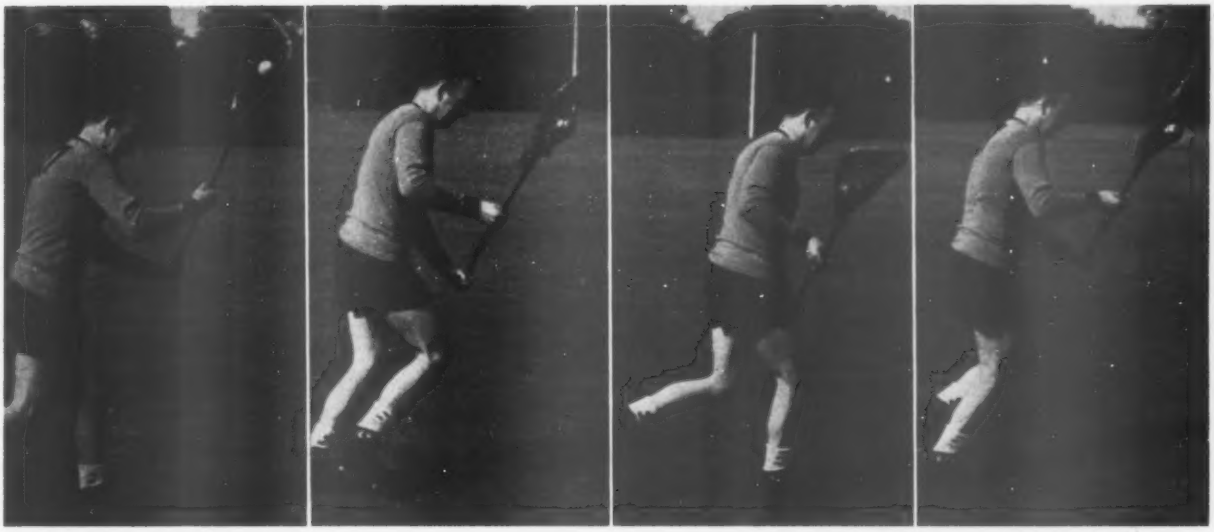


Another Athletic Journal first—

pictorial analysis of the

Fundamentals of Lacrosse

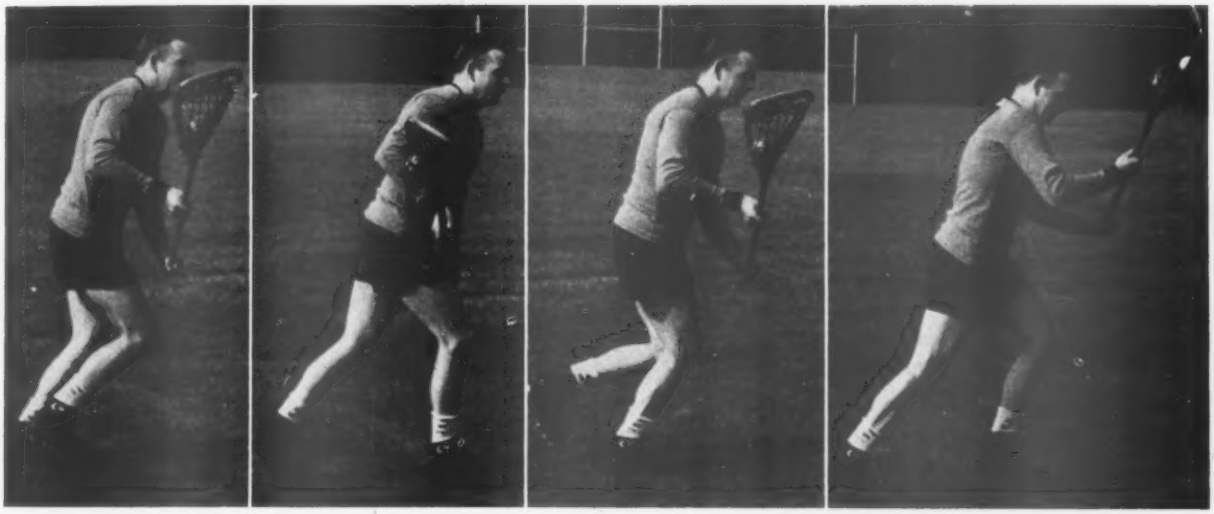
By HARRY DUBICK

THIS article was prepared to familiarize the many high school and college officials who, because of lack of knowledge, have hesitated about adopting lacrosse.

Before moving into an explanation

Illustration shows the proper method of holding the lacrosse stick.

(Series A) CRADLING



HARRY DUBICK graduated recently from the University of Maryland where he competed in varsity lacrosse. Dubick is active in the United States Intercollegiate Lacrosse Association. The Association is sponsoring an active promotional campaign to encourage the growth of lacrosse and under its auspices the game has been demonstrated at numerous conventions and meetings. He is currently on duty at the Aberdeen Proving Grounds where he is coaching the camp basketball team.

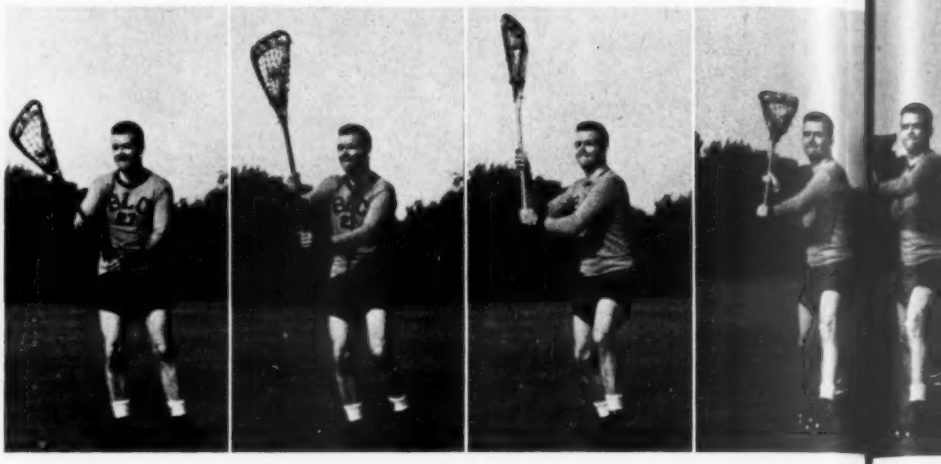
of the fundamentals, let us discuss the sport in general. Lacrosse combines rough football type checking, speed for maneuvering as in basketball, and the endurance of distance runners. A player should possess all of these qualities, but these comprise only half of the necessary qualifications. The other half comes in the challenge of developing handling of the stick with finesse.

In order to learn the other skills, a player must first learn how to hold the stick. In holding the stick correctly, a right-handed player grasps the end of the handle with his left hand palm down; his right hand with the palm up will take its proper place on the handle as both arms hang naturally at the player's side. The accompanying illustration shows the proper method of gripping the stick. This procedure is reversed for a left-handed player. Two points should be watched carefully; the left hand should be placed at the extreme end of the handle and the right hand should not be placed up at the throat of the stick.

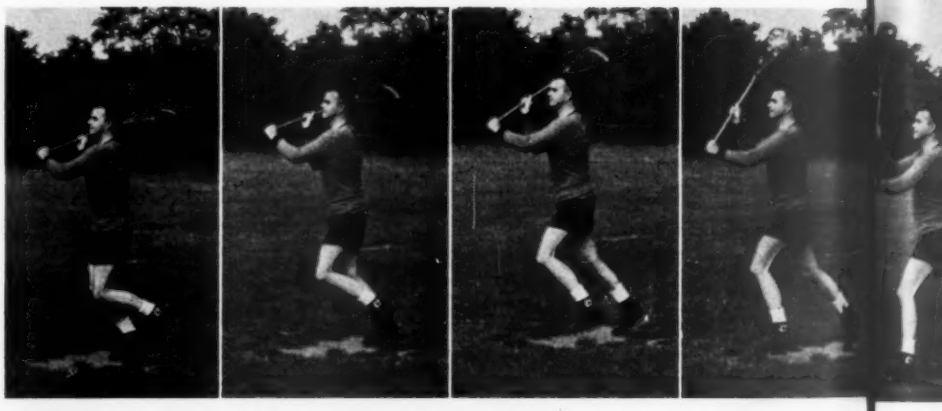
The next fundamental to be learned should be how to cradle the ball. Cradling is the movement of the arms

GEORGE HANFORD, who posed for our high speed camera, has had a long association with the game of lacrosse, having played for Exeter Academy in 1935-37. At Harvard he was All-New England selection for three years and All-American second team selection for his senior year. Following the war, he played with the Boston Lacrosse Club during the 1946-1948 seasons. Currently he is treasurer and assistant football coach at North Shore Country Day School in Winnetka, Illinois.

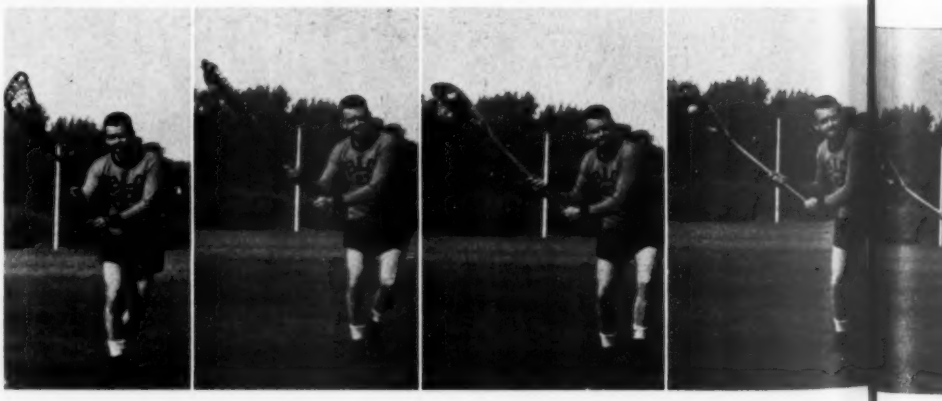
(Series B) OVERARM THROW (Front View)



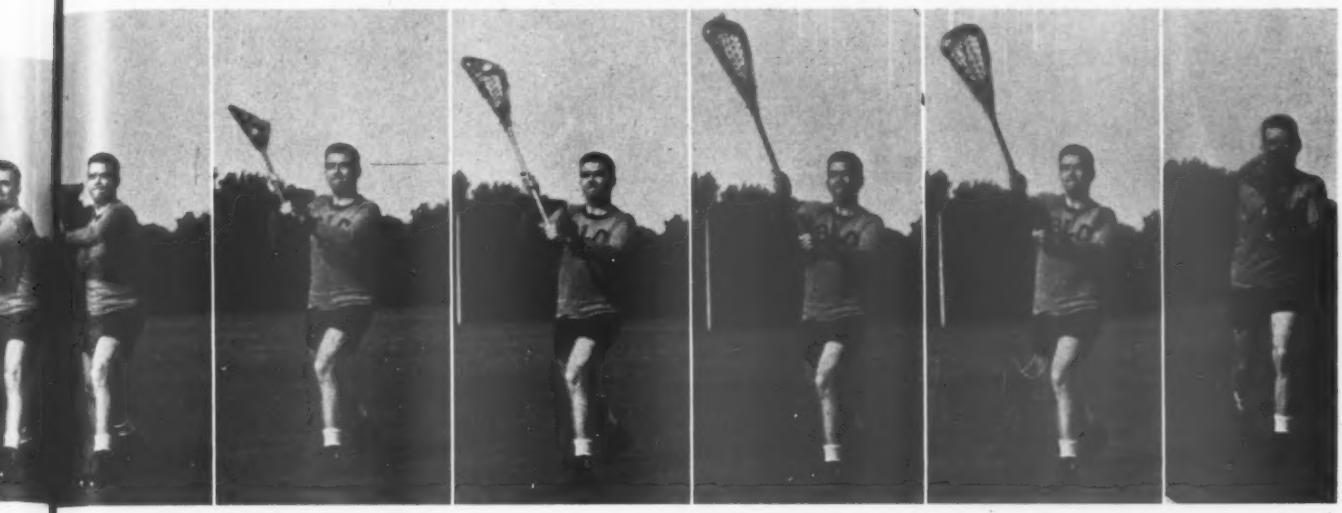
(Series C) OVERARM THROW (Side View)

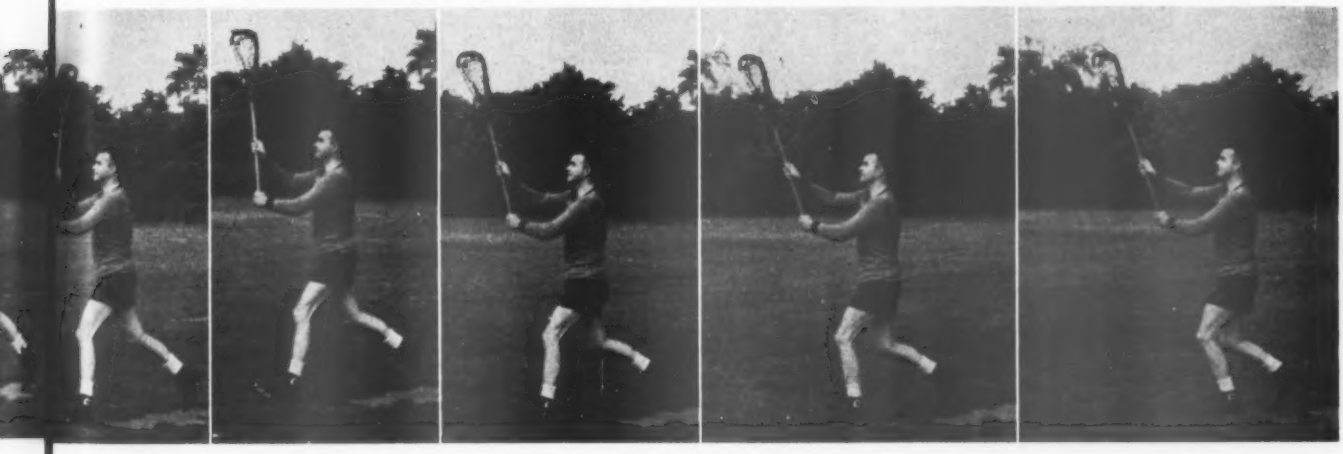


(Series D) SIDEARM THROW

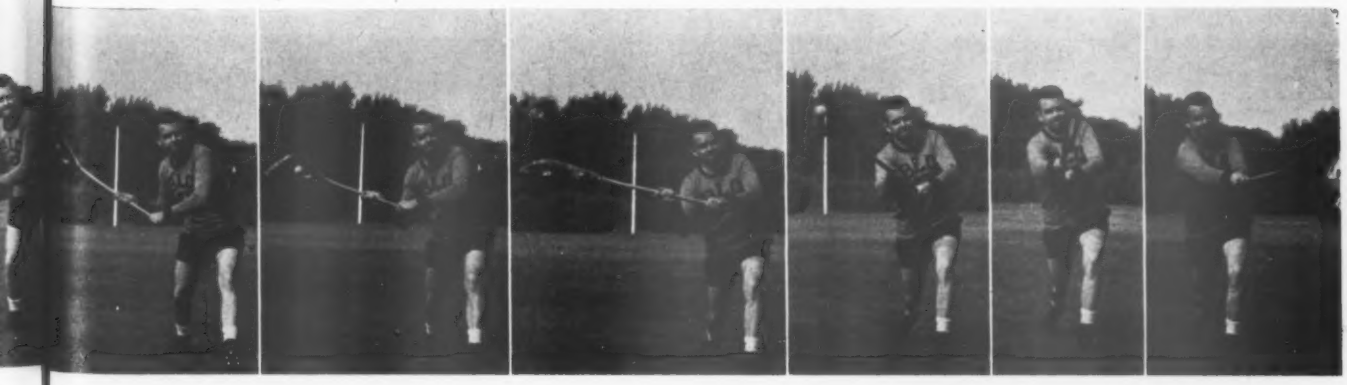


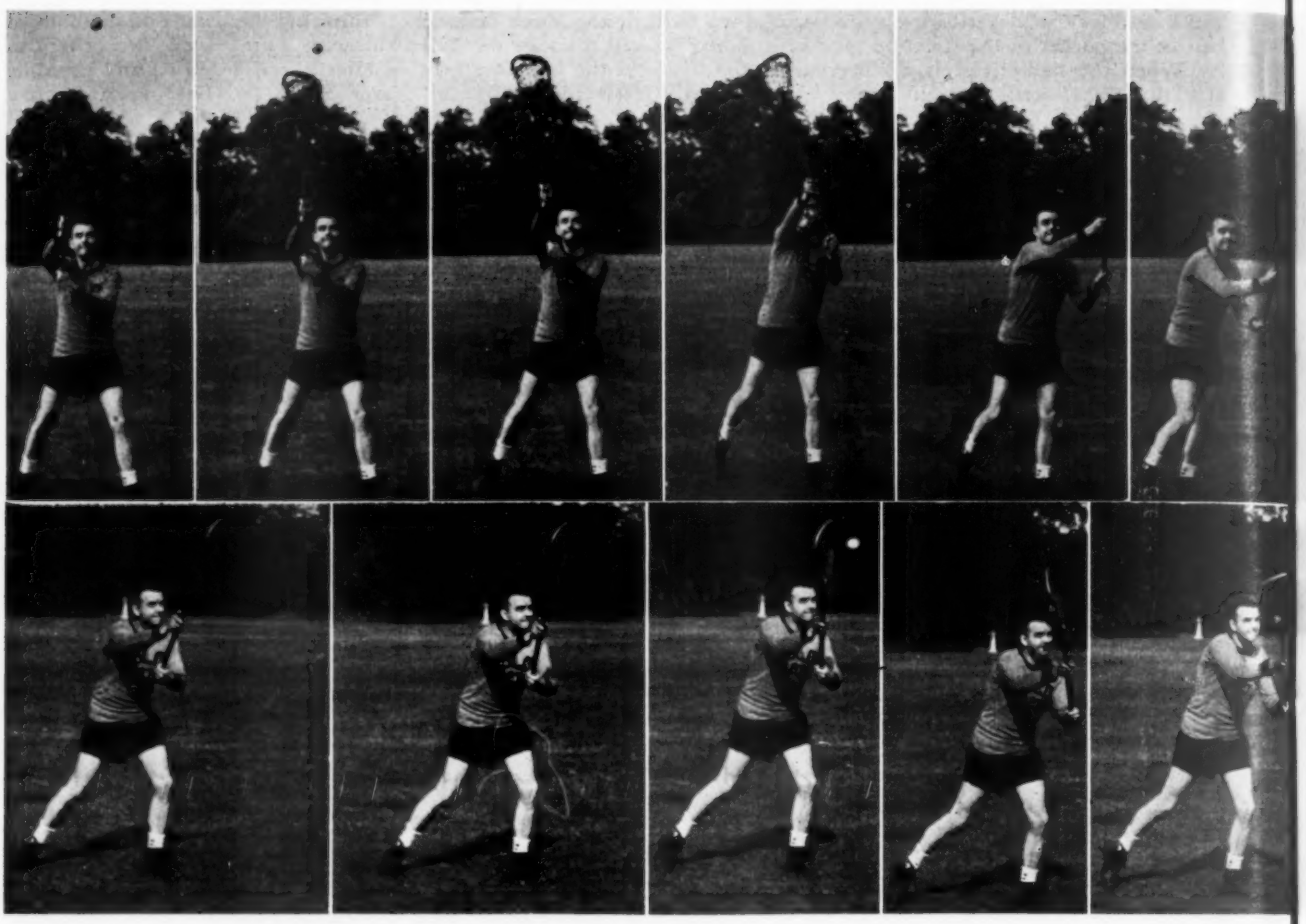
which enables the player to keep the ball in the pocket of the stick (Series A). When the ball-carrier is moving at a slow pace, cradling would consist of a slight twisting of his wrists and the gentle swaying of his arms. When he is moving fast, cradling develops from the natural motion of his body and the swaying of his arms. A beginner must be careful not to cradle too hard or too much because in so doing he will dislodge the ball from the stick. As the beginner progresses he will learn to sense the correct speed and movements which are necessary. Then it will no longer be necessary for him to look at the stick because cradling will become a natural motion.





The next fundamental of lacrosse is throwing the ball. Two methods of throwing are used—the overarm (Series B and Series C) and the sidearm (Series D). The overarm throw is the most popular, and it is easier to learn. In throwing a lacrosse ball with the stick, the arm and body movements are the same as those which are used in throwing a baseball with the hand. When a right-handed





(Series E) CATCHING

Top

player prepares to throw he should stand with his left side toward the receiver. The stick is held with his left hand close to his body, and about waist high. His right hand should be back as if preparing to throw a baseball and his elbow should be bent. The player's body is turned to face the receiver. Now, the stick is in a position, face up, with the ball resting in the pocket. The player's left hand will act as a pivot, moving in a vertical motion, keeping close to his body. Then the stick is drawn back slightly with the player's right arm. It is then brought forward and the

(Series F) CATCHING

Above

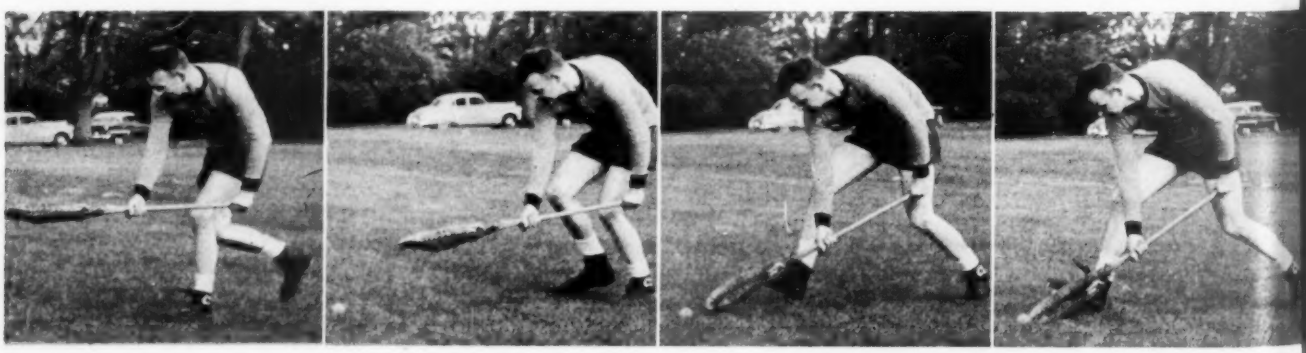
face is aimed toward the receiver. The player's body bends forward slightly, while his left foot takes a short step forward. His right arm is carrying forward its full length.

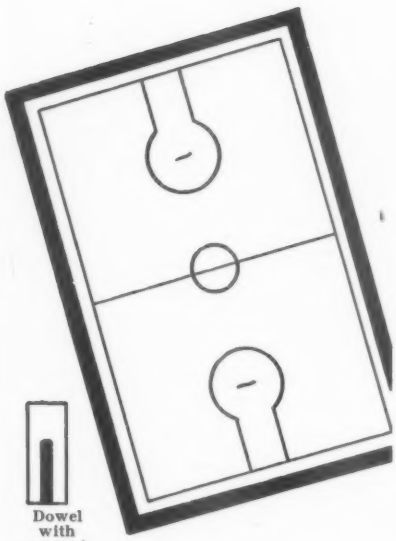
The sidearm throw is executed with the same leg and body movements. In this throw the player's right arm follows a horizontal circular motion, as it does when throwing a sidearm pitch in baseball. The movements for a left-handed player are the same, interchanging the words left and right.

In catching the ball, the player must be ready with the face of his

(Continued on page 54)

(Series G) SCOOPING





Dowel with magnet inserted.

Material List:

Two pieces 14" by 22" galvanized tin.
One piece one-quarter inch plywood.
Two pieces 1" by 1" wood (any kind) 22 inches long.
Two pieces 1" by 1" wood (any kind) 14 inches long.
Eleven magnets.
Twenty-two one-quarter inch dowels.

Combination Magnetic Demonstration Board

By FRED G. HARWICK

Basketball Coach, Otto Twp. School, Duke Center, Pa.

A NUMBER of years ago we constructed a combination football and basketball magnetic demonstration board. Today, this board could be duplicated for an expenditure of about $3.00 for materials.

Materials which are necessary are shown in the accompanying box. The size of the board is arbitrary, but we have found the 14" by 22" size to be ample for our purposes. When finished, the size is approximately twice the size of this page.

The construction of the board is easy and can be done in a short time in the manual training shop. Power tools are not essential, but their use will lessen the work required and make for a more professional job if they are available.

Plywood is used for strength and to give rigidity to the board. Two pieces of galvanized tin are placed on either side of the plywood. Four pieces of 1" by 1" wood form the frame and should be rabbeted so that the two sheets of galvanized tin and the plywood will fit into the grooves.

The corners should be mitered, glued, and nailed. On one side should be painted the basketball court as shown and on the other side a football field. We have found that painting just the lines is ample. If the overall court and field are painted, care must be taken that the paint will not be of such a nature as to deaden the pull of the magnets.

FRED G. HARWICK graduated from Stroudsburg State Teachers College and started his coaching career at Emmaus High School, his old school. He moved to Otto, Pennsylvania, High School in 1944 and coached both football and basketball for three years, relinquishing the football reins in 1947. In his 14 years of coaching basketball his teams have won 131 out of 177 games.

One-quarter inch dowels are used to make the football and basketball men. The cylindrical rod magnets are about 5 to 6 centimeters long and may be purchased through the science department from any chemical supply house.

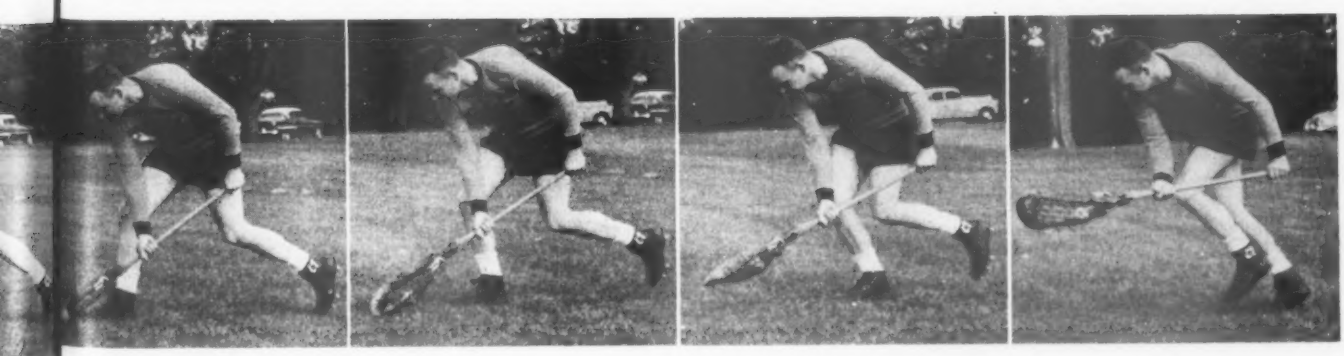
Then the dowels are drilled slightly smaller than the circumference of the magnets. The magnets are driven into the dowels half way, and cut off with a hack saw. The remaining half is used in the next dowel. It is important that the magnet be flush with the bottom of the dowel.

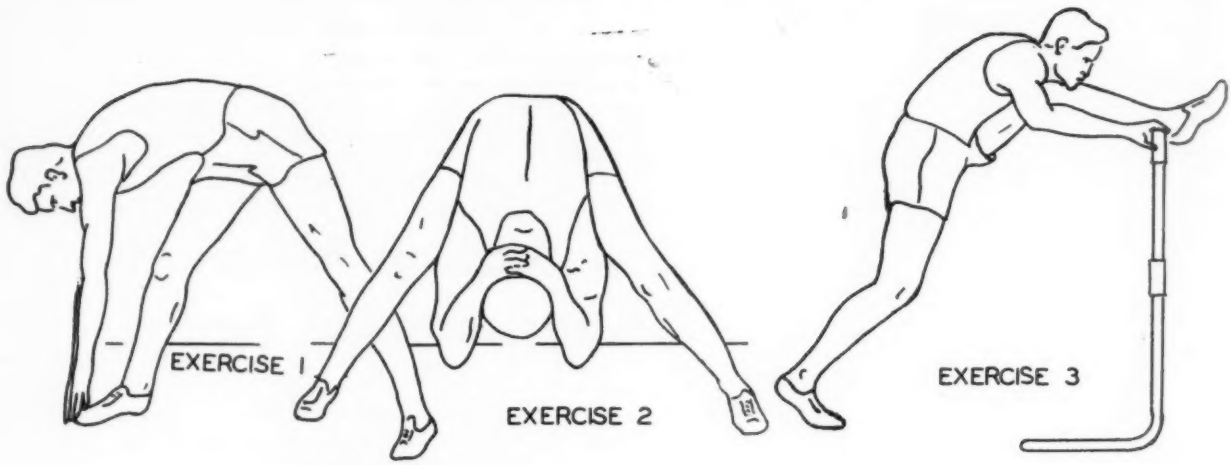
When finished, the dowels are painted two different colors and the magnetic demonstration board is complete.

If just a basketball board is required, only one sheet of galvanized tin, five magnets, and ten dowels will be required.

We find this size board is ample for our needs. This size board is easy to carry and fits into the trunks which we use for carrying our equipment. A board small enough to carry is essential in our vicinity because most of the dressing rooms do not have blackboards. We use the board for pre-game talks on offense and defense and for half-time instruction on ways of moving the ball through our opponents' defense or methods of stopping their offense.

The board is easy to build, is inexpensive, and has been a real blessing. We hope that you will find it the same.





Hurdle Exercises

Exercise 1

The hurdler stands with his feet wide apart and his arms extended. Then he touches his left toes with his hands, returns to first position, touches his right toes with his hands, returns to first position, and continues.

Exercise 2

For this exercise the hurdler stands with his feet wide apart, hands clasped behind his neck, and elbows extended. He swings his upper body far forward and up again. His knees are kept straight.

Exercise 3

We have the boy stand in front of the hurdle, with his lead leg placed on the hurdle. Then he rocks slowly forward and down, then back and up, stretching his crotch and hip tendons.

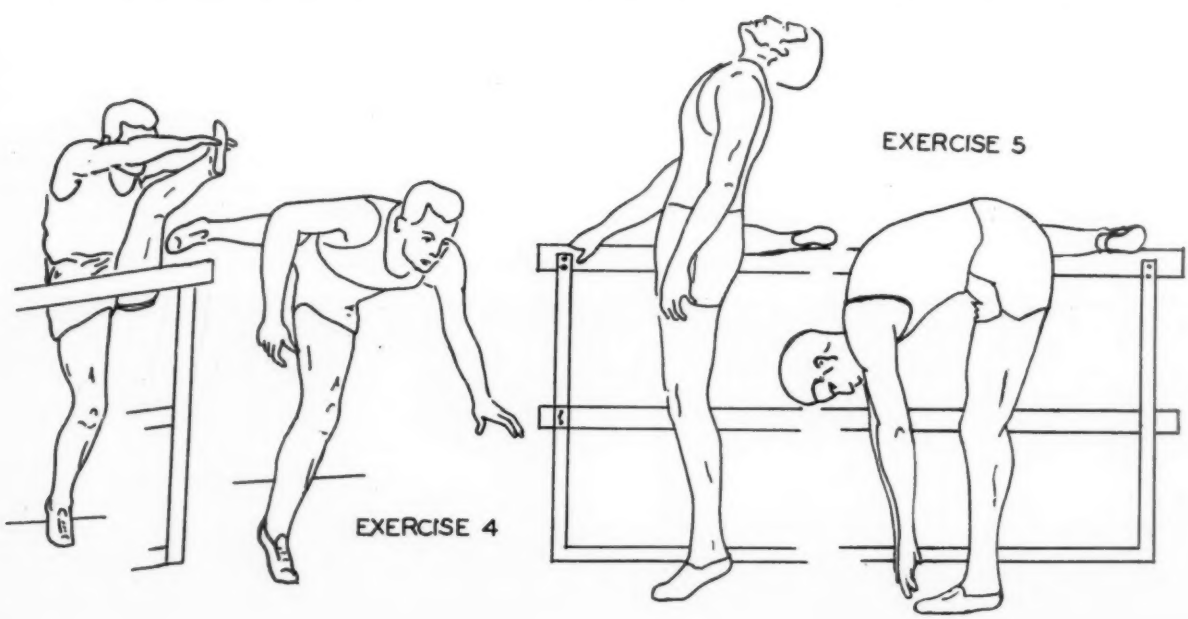
Exercise 4

The hurdler walks along beside a hurdle. He throws his lead leg forward and up as in hurdling, then down to the ground to a point about two feet beyond and outside the hurdle. Then he swings his trail leg over and continues on to the next hurdle. All actions should be kept as similar to hurdling as possible.

Exercise 5

For this exercise the hurdler places his trail leg on the hurdle. He stretches upward as high as possible. Then he stretches forward and down until his fingers at least are touching the ground.

Selection an



and Training of High Hurdlers

By J. KENNETH DOHERTY

Track Coach, University of Pennsylvania

THE problem of selecting candidates for the high hurdles in both college and high school involves four considerations: speed, height, flexibility, and attitude. Contrary to common practice, the most important of these is speed rather than height. Primarily, a man's potential hurdling time is determined by how fast he can run 120 yards. The difference in time between running 120 yards on the flat and running 120 yards over 10 hurdles lies somewhere between 1.8 and 4.0 seconds.

If about 2.5 seconds are added to the candidates' times for 120 yards, their potential time for the 120 yard high hurdles can be approximated. Obviously, if a man can run 120 yards in a slow 13 seconds (equivalent to 100 yards in about 11 seconds), he cannot hope to do better than 16 seconds over the college height hurdles, no matter how perfect his general build may be, or how persistently he may practice. On the other hand, a man who can sprint 120 yards in 12 seconds, even though he is comparatively short for a hurdler, can hardly fail to beat 16 seconds, no matter how bad his form may be.

A glance at the accompanying table will show that, of the great hurdlers, Towns and Osgood required only a 1.9 seconds differential; Beard and Attlesey, 2.0 seconds; Thomson, 2.2 seconds; Davis and Dillard, 2.3 seconds; and Wolcott, 2.5 seconds. It is important to emphasize here that these figures are based on uncertain sprinting records of the men involved, for hurdlers' true sprinting ability is seldom and inconsistently tested. However, the overall picture is clear. A tall boy, over 6 feet in height, who is determined to be a hurdler, but who has no speed, should be encouraged. What can either the boy or the coach lose? Who knows how much speed such a boy may acquire in two or three years' time? But the coach should be prepared for the disappointing experience of watching a rival's castoff sprinter break the finish tape, despite his obvious lack of coaching and intensive practice.

Second, the coach should look for agility and flexibility in his candidates. Where muscular quickness is present, these qualities are usually associated with lighter construction of both bone and muscle. A glance over the world's record holders finds few exceptions to this type of build. Yet, there have been innumerable exceptions in the good hurdler class

Outstanding Performances in the 120 Yard High Hurdles

Date	Record	Name	Affiliation	Hgt.	Wgt.	Time	Olympic 100y. Champion
1885	:16.2*	A. A. Jordan	NYAC				
1886	:16.4	A. C. Croome	England				
1891	:15.8*	H. L. Williams	USA				
1895	:15.4*	Stephen Chase	Dartmouth	6' 2			
1898	:15.2*	Alvin Kraenzlein	Pennsylvania	6'		:10.0	1900
1904	:16.0	F. W. Schule	Michigan				1904
1908	:15.0*	Forrest Smithson	Oregon	6'		:10.0	1908
1913	:15.0	Fred Kelley	South. Cal.	6'			1912
1916	:14.6	Robert Simpson	Missouri	6' 4	170	:10.3	
1920	:14.4*	Earl Thomson	Dartmouth	6' 3	180	:10.3	1920
1927	:15.0	Dan Kinsey	Illinois	6'	160	:10.4	1924
1928	:14.8	S. Atkinson	South Africa	6' 3	170		1928
1929	:14.4*	E. Wennstrom	Sweden				
1930	:14.4*	Steve Anderson	Washington	6' 3	170		
1931	:14.2*	Percy Beard	Alabama Poly.	6' 5	170	:10.3	
1931-1935	Four men tied :14.2 record: Moore, Cal., Cope and Staley, USC, Moreau, LSU						
1932	:14.6	George Saling	Iowa	6' 3		:09.8	1932
1932	:14.4	Jack Keller	Ohio State	6' 4	170	:09.7	
1937	:14.0	Robert Osgood	Michigan	6' 2	168	:10.1	
1937	:13.7*	Forrest Towns	Georgia	6' 2	172	:09.9	1936
1941	:13.7*	Fred Wolcott	Rice	5'11½		:09.5	
1948	:13.6*	Harrison Dillard	Baldwin-Wallace	5'10	155	:09.4	
(Unbeaten in 82 consecutive races)							
1948	:13.9	William Porter	Northwestern	6' 3	190	:09.6	1948
1949	:14.5	Donald Finlay	England	(Age-41)			
1951	:13.5*	Dick Attlesey	South. Cal	6' 3½	178	:09.6	
1951	:13.7	Jack Davis	USC	6' 2	160	:09.6	
1952	:13.7	Harrison Dillard	Baldwin-Wallace				1952

* Official world's record.

Reprinted from "Modern Track and Field" (Doherty) Prentice-Hall

Other Exercises Not Illustrated.

Exercise 6

In this exercise the boy takes a hurdle position on the ground. His back leg is at right angles to his front leg which is stretched straight forward. He leans forward, head down, and touches his elbow as far forward to the left of his front leg as possible. Then the exercise is repeated.

Exercise 7

This exercise is used to practice high kicking with both legs. The hurdler should start slowly and take it easy at all times.

Exercise 8

In this exercise the splits are practiced. The hurdler should lower his body gradually as his feet are spread, forward and back, farther and farther apart. Then he swings his weight forward and lowers his head toward his knee. Overstretching should be avoided.

Exercise 9

The hurdler bends his trunk forward to the horizontal, with his arms dangling loosely. He turns right and left quickly with a vigorous swinging of his arms up and down. Then he relaxes his knees.

Exercise 10

The hurdler should sprint in every fashion and at every opportunity. He should sprint with exaggerated bounce in his feet and ankles and with an exaggerated lift of his knees.

and a coach cannot afford to select candidates according to type of build alone. Various exercises can be used from physical fitness manuals by which agility can be tested. But, as in all such instances, those hurdlers who most nearly copy hurdling action are likely to prove most valid. The best method lies in watching the men run, one at a time, over a flight of three low hurdles. Two or three times over the low hurdles should eliminate the impossibles and highlight the best prospects. The uncertain middle group should be encouraged to continue and let persistence determine their hurdling futures.

The third basis for judgment, that of height, is easily secured and is important. All but two world's record holders have been over 6 feet in height, and all but six of them have been over 6 feet, 2 inches. Yet, many men under 6 feet have won championships in both college and high school competition.

This brings up the fourth criterion, that of attitude. Although intangible and not immediately measurable, attitude is essential to success. Obviously, a disinterested hurdler will show little improvement. On the other hand, a coach cannot afford to assume that running over wooden barriers is naturally intriguing to all good hurdling prospects. Interest must often be stimulated, and usually by the coach.

There are many methods: 1) The candidates must know and appreciate the goal to be attained. They should be called together and complimented on their performances and potentials as hurdlers. The requirements as to both ability and practice should be reviewed and the rewards for success stated clearly.

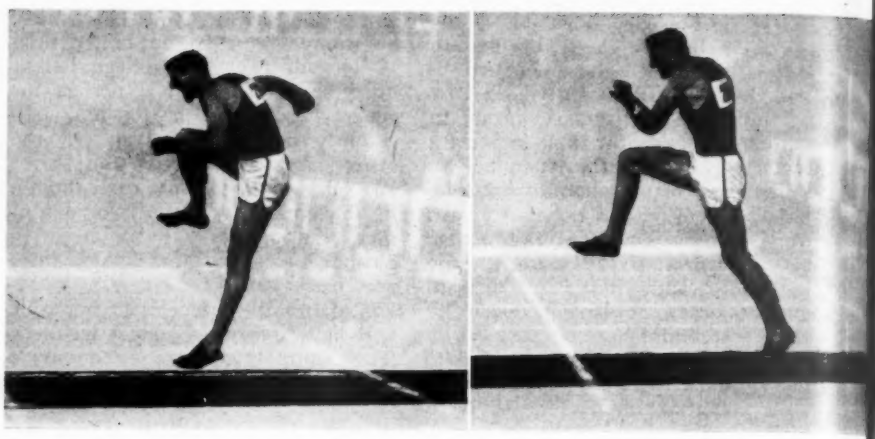
2) Stories of previous coaching success in developing hurdlers can create enthusiasm and confidence.

3) Pictures of great hurdlers, such as those of Davis on the following pages, and hurdling records of all kinds should be placed on the locker room bulletin board.

4) Various pieces of special equipment for practice will stimulate interest and thoughtful practice.

5) A well-organized and detailed set of hurdling exercises will improve both morale and flexibility.

6) Above all, direct contact with the constant enthusiasm and patience of the coach will do the most to maintain interest. Hurdling skill is



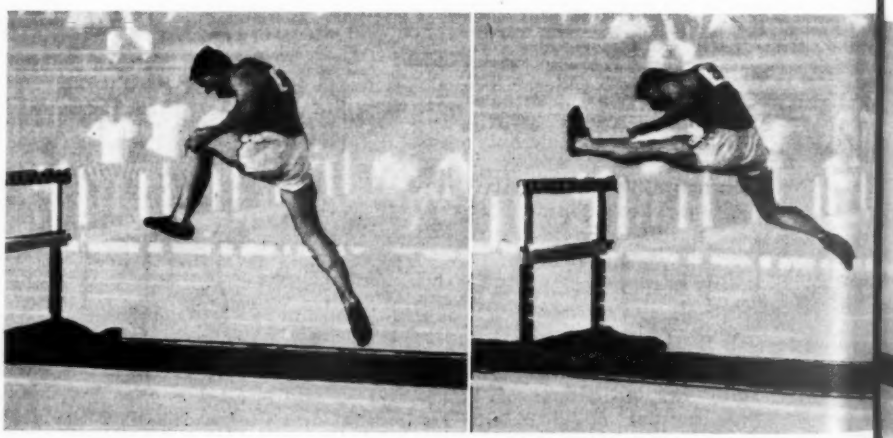
THESE illustrations show Jack Davis who graduated from the University of Southern California in 1953. Davis is 6 feet, 2 inches tall and weighs 180 pounds. He was National Collegiate champion for an unprecedented three years, 1951, 1952, and 1953. As a sophomore he made his best time which was :13.7. Davis ran :09.6 for the 100, in addition to many fine legs on the USC 440 relay team. His best time for the low hurdles was :22.8.

Illustrations 1 and 2 show excellent sprinting action while hurdling. Notice that the body angle shown in Illustration 1, as Davis comes off the hurdle, is identical to that shown in Illustration 3 when he is sprinting between hurdles. We gain the impression of a vigorous and continuously flowing movement, not so much up and over the hurdle, as through and beyond it, with almost no loss of momentum. As we mentioned, it took Davis only 2.3 seconds longer to clear 10 hurdles than if he had run the 120 yards without obstacles. His trail leg is reaching forward for a full stride off the hurdle which is so important for proper speed and proper striding to the next hurdle.

Illustration 3 was selected to emphasize the sprinting ability so important to Davis' and to all great hurdlers' success. The sprinting style shown here would do credit to any of our best sprint champions. Notice the drive and bounce of Davis' left ankle and foot, his high full-striding knee action, the good forward lean of his body, and the driving action (somewhat too tense, however) of his arms.

Illustration 4. Davis' take-off foot, judging by hurdle heights, is not less than 7 feet from the hurdle and thus permits a full and free swing forward of his lead leg along with an excellent forward bend of his body. Observe the height of Davis' head in this series of pictures. It will be noticed that his head is actually higher at the take-off (Illustration 4) than it is during the entire action of clearing the hurdle, a real tribute to Davis' economy of style.

Illustration 5 is a beautiful action picture, showing a driving movement straight-ahead that is about as identical to sprinting form as hurdle height will permit. Tip the picture down to the left and notice the great similarity between this action and the



These pictures were taken at the 1953 National Collegiate Track Meet which was held at Lincoln, Nebraska.

sprint style which is shown in Illustration 3.

Illustration 6 shows a full forward lean. Davis' right arm is well forward, although somewhat high, and it has pulled his right shoulder forward in a fine front facing action. Davis' low head position throughout this series is excellent, though possibly conducive to tension around his neck and shoulders. He appears to watch the hurdle even after his center of gravity has passed beyond it, much as a golfer concentrates his eye on the ball. We can imagine that Davis and his high school as well as college coaches drilled on this point until it became exaggerated, a wonderful fault.

Davis' short arm, his left, is almost motionless throughout Illustrations 5, 6, 7, and 8. This could be the result of excellent balance or it might indicate something less than perfect relaxation.

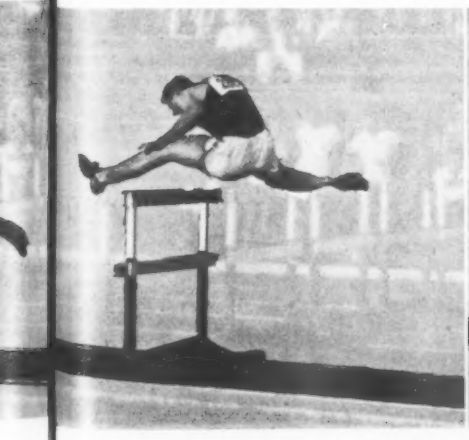
In this illustration Davis' lead leg and foot show the one aspect of form in which he is inferior to our greatest stylists. His leg is straight at the knee, and his foot is pointing vertically. The camera may have caught Davis while he was going over a bad hurdle but the clearance here is too high and certain to take an unnecessary fraction of a second.

Dick Attlesey, who holds the world's record of :13.5, would have maintained a slight bend of his knee at this point, with no loss of time in foot placement.

In Illustrations 7 and 8 Davis' toe moves downward rapidly so that he seems to hit the ground within the recommended 4 feet, 6 inches beyond the hurdle, yet something in time economy has been lost. Incidentally, Harrison Dillard had this same fault, although to a much greater degree.

Illustration 7. Illustrations 7 and 8 show Davis' trail leg coming through beautifully, indicating the flexibility of his hips which is so essential to hurdle form.

Illustration 8. Notice Davis' horizontal right foot which is in no danger of catching the hurdle with his toe. His lead arm and hand (the right) are coming back low, just clearing his trail leg. A greater bend at the elbow throughout Illustrations 7, 8, 1, and 2 might provide a lesser tendency to pull his right shoulder back and around as is shown to a minor degree in Illustrations 1 and 2.



attained only after years of consistent practice. Hurdlers will be disappointed if they expect to achieve success within a short time.

The second problem to be discussed in this article is that of the general procedure for practice. Practice patterns seem remarkably uniform not only in textbooks, but also in work on the field. Actually, there is great variation not only in the degree of emphasis upon this or that phase of practice, but also in the degree of work and drill that is demanded. Some disinterested coaches and athletes seem to assume that 15 or 20 minutes of actual hurdling are sufficient for good performance. Others find that two hours are hardly enough in which to work adequately on all the many aspects of hurdling. The former are minimum workers who are satisfied with minimum results; the latter make hurdling an intriguing hobby, with innumerable angles and problems which challenge the coach's utmost energy, time, and interest.

LESS than a year ago Ken Doherty's book, "Modern Track and Field," was published by Prentice-Hall. In the short space of eight months this book has been adopted as a standard textbook in numerous physical education courses and it ranks as the most comprehensive book on track and field to be published. We are indebted to the publishers for permission to use the table of outstanding hurdle performances.

Coaches agree that early practice for beginning hurdlers should place conditioning above skill and gradual progress above immediate results. Several weeks of gradually increased running and exercising should precede actual hurdling. Such preliminary work will not only prevent injuries and delaying strains, but it will also give the prospective hurdler a sense of more rapid progress when hurdling actually begins. Certain exercises are standard not only for this early season work, but for the warming-up period which precedes all hurdling practice.

The athlete should acquire a regular routine of six or more exercises similar to those illustrated on the first page of this article. It is necessary for the coach to warn the boys repeatedly that the very purpose of such

(Continued on page 47)

The Backs Go Tearing By on What Kind of Turf?

By COLONEL RED REEDER
Assistant Graduate Manager of Athletics, United States Military Academy

"HOW do they get that striping effect on that stadium turf? Look! Half of the five yard stripes are Kelly green, the rest dark green!"

"That's easy. They just grow a different type of grass seed in every other five yard stripe."

Even if this were a feasible method, there is an infinitely simpler way to arrive at this effect. The two-tone striping effect is caused, of course, by rolling half of the five yard lines in one direction and half in the reverse direction, alternating the direction of the roller in adjacent five yard stripes.

The above conversation occurred one crisp Saturday afternoon in Michie Stadium at West Point, New York. It is typical of the lack of information on the work and problems of the men who are charged with the maintenance of athletic field turf.

Army's football coach, Colonel Earl Blaik, hopes to have his men play on turf which is firm, fast, springy, and green. If a coach has the desire to give his athletes stadium turf which is firm, fast, springy, and green, he will need equipment and supplies for seeding, fertilizing, mowing, and watering. In addition, he will need equipment to aerate the field, a roller, and pluggers.

Every groundskeeper worries about the turf being kicked out of his stadium when the center snaps the ball and the backs go tearing by. In watching the game he wishes, "they would move out of that spot they have been digging up for the last five minutes and play elsewhere" — and he does not mean down near the goal his team is defending.

Rolling alone will not save turf. A groundskeeper knows if he rolls too much the ground gets fast and hard and its springiness vanishes. Throughout a large section of the country, excessive rolling contributes toward producing the obstinate, stringy, pesky knotweed.

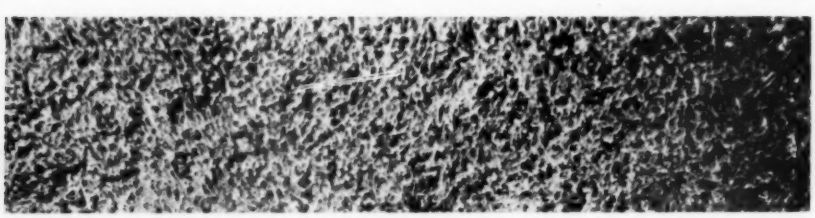
The first complaint about a field which is too hard comes from the players. Those who are suffering from shin splints rightly complain. Then an injury occurs to a back who is cornered and slammed to the ground by opposing linemen. The groundskeeper gets the word, "You've got to do something about this field, Joe. It's way too hard."

The maintenance man tempers the effect of rolling and at the same time puts springiness into the sod by the use of an aerating machine. This machine, when pulled over a piece of turf, punches holes in the ground. It is equipped with hollow tines, usually one-half inch in diameter and about four inches long. These hollow tines remove numerous small cores from the soil which allow air, water, and fertilizer to get to the roots quickly. Ike Armstrong, in the September 1951 issue of *The Athletic Journal* figured such a machine pulled once over a football field removed 251,500 cores. In addition to putting springiness into the turf, the cores form top dressing for the field.

An aerator is a necessity if a stadium is to have springy turf. However, the machine cannot be used indiscriminately. For instance, if it is used in May where crabgrass is a

(Continued on page 48)

Illustrations above and below show detail of plugging operation. Illustration at left shows close-up of the luxuriant, thick turf on the West Point football field.



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JOHN L. GRIFFITH *Publisher*

Athletic Competition for Children?

LAST March we discussed the "Report of the Joint Committee on Athletic Competition for Children of Elementary and Junior High School" which had recently been issued.

Not since the days of the old arguments of competitive athletics versus calisthenics, marching, and gymnastics has any argument found as many proponents on either side. As we read the statements from physical educators and medical authorities, we have been unable to determine a preponderance of opinion either way.

For example, Dr. Charles Bucher, the very noted physical education authority, quoted Dr. C. L. Lowman recently in "Look" magazine as follows: "I consider the movements to encourage highly organized competitive activity for boys and girls below the high school age to be especially dangerous because neither skeletal growth, cartilages or joints, to say nothing of muscles, are sufficiently developed."

Mr. Creighton Hale, instructor in physiology at Springfield College, said: "Now the data, the facts presented deal with any type of activity as far as physiological evaluation is concerned. It is true of football, true of basketball, and all other activities. No physiological harm can be done to a child, regardless of the sports that we have today. Realizing that basketball is much more strenuous, still it cannot harm a child physiologically. Perhaps I should point out there is a difference between physical injury and physical harm. You could have a broken bone which is an injury and physiologically it will not harm. In fact, a broken bone, as many know, may mend to be a stronger bone than it was before it was broken."

Mr. Hale also says: "Scientific research substantiates the fact that competitive athletics do not physically harm normal children and yet there are people who still knowingly or unknowingly perpetuate this idea that there is a physiological harm which can come to a child through competitive sports. In 1948 and again in 1950 at the International Congress of Sports Medicine this problem was studied and it was agreed by the physiological and medical people specializing in this area that there is no physiological harm done to children by competing in athletics."

Dr. Bucher says: "The American Medical Association strongly discourages even interscholastic competition below senior high school level." There even seems to be a question regarding the stand of the American Medical Association. Commenting on the statement that the Association has never taken any official action regarding junior high school athletics, Dr. Delbert Oberteuffer, professor of physical education at Ohio State University, said: "Of course not, the Association could hardly be expected to take action in a matter of that kind."

Dr. J. Roswell Gallagher, who heads the adolescent services of Children's Medical Center in Boston, said in a recent issue of "Parade:" "What we need in America's schools today is more athletics. Parents don't realize that most teen-agers need more exercise than they get."

Dr. Bucher cites several illustrations of extreme emotional pressure which Little Leaguers are under: "Defeated players in a Midwestern state finals cried like babies and then further vented their grief by wrecking the lobby of their hotel. Youngsters playing in a Minnesota state tournament were affected by loss of appetite, upset stomach, insomnia, tears, and homesickness. Remember these are not professionals or semi-professionals or even high school competitors. They are boys from 8 to 12."

Dr. Esslinger, director of major courses in physical education at Springfield College, reports on a questionnaire which all of the parents of the players in Fresno, California were required to fill out. "1) Did Little League play cause your son to lose sleep? Yes: 3, No: 147. 2) Did Little League play make him restless at night? Yes: 5, No: 144. 3) Did Little League play make him nervous? Yes: 9, No: 140. 4) Do you feel that Little League hurt him? Yes: 3, No: 143. 5) Would you let him play again next year? Yes: 149, No: none. 6) Do you feel that Little League Baseball is a good thing for boys? All 150 parents answered in the affirmative."

(Continued on page 20)

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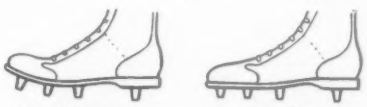

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One of the most prevalent arguments against Little League is that the adult leadership is far from adequate. Mr. Ben Solomon, editor of "Youth Leaders Digest," appearing on a panel forum at Springfield College said: "Little League leaders generally are untrained volunteers, most of them not the type to lead youth. Now get this straight. Most of them are trained in baseball or in other sports but that isn't enough to lead youth, especially nine, ten, eleven, and twelve year olds. You have to know a great deal more about youth than how to bat a ball, catch or throw. They are untrained volunteers many of them fanatics . . . . We have some reports already of serious things done by these so-called leaders of youth."

Dr. Bucher cites several examples wherein the adult managers have used profanity and been guilty of vicious heckling practices. Mr. McConnell, who is on the national staff of Little League, mentions the names of numerous school and college men who are leaders in the program.

Mr. John Bunn, athletic director at Springfield College, says: "All of the leagues have been surveyed, 1700 of them, and from the survey which has come in, which represents a 50 per cent return, that of the managers of these leagues, 63.5 per cent had some training in youth leadership. Of the officers of the Little Leagues in the various communities over 70 per cent had some training in youth leadership. I am wondering if our public and private recreational departments in the United States today have that high a percentage of trained leaders for youth activities?" Mr. Bunn goes on to say: "This (information) was broken down as to whether they were school teachers, whether teachers of physical education, whether they had trained in scout work, YMCA, CYO, Sunday school work, Boys' Club, etc. and the tabulation has been made on that basis. In many cases, many of them had had training in all of these phases."

The stock and classic argument advanced by all the opponents of organized competitive athletics is that it limits the use of facilities to a special few. This, of course, is true whether it be Little League and city recreation areas or varsity teams in school athletics.

In the "Look" article Dr. Bucher cites some examples to show how Little League has encroached on city recreation areas, for example: "At Bay Shore, New York, the town highway department brought in snow fences to enclose a Little League baseball diamond in the middle of the Fourth Avenue School's play field. The field is used spring, summer, and fall. As a result, the majority of the school children are denied a full play program."

Mr. Solomon in discussing Peekskill, New York says: "The Kiwanis Club used to give the Recreation Department $1500 a year to promote baseball and other activities in our city. When this Little League picture came up and they formed the Little League committee they decided to give the $1500 to the Little League committee for this particular activity and did not have any money left or any desire to give any more to the committee (Recreation Department). Very often when sponsors in a community give money to the Little League they think their duty has been done and don't give any more."

Dr. Bucher doesn't agree with Mr. Solomon and says: "The many undesirable features of Little League are clearly recognized in many communities. In Peekskill, New York, the Kiwanis Club, which fostered sand lot baseball in that city, the recreation commission, and the Joint Veterans' Council all worked successfully to stop a Little League movement started by a handful of adults."

There can be expected to be disagreement between views on theoretical questions such as the psychological and physiological effects of competitive athletics on children. However, when two authorities cannot agree on a factual question, whether the Kiwanis Club of Peekskill did or did not sponsor Little League, we do not wonder that the entire issue is somewhat clouded.

Dr. Bucher finds fault with the fact that "in Englewood, New Jersey, the Little League, complete with field house and bleachers, and used solely by Little Leaguers, was financed by the Rotary Club and is now maintained by the city."

Mr. John Bunn says: "That 55 per cent of the communities where Little League Baseball was organized did not have a recreation department and when Little League Baseball came in, 32 of these as a result of the stimulus of Little League Baseball have organized public recreation departments."

Largely the above opinions have dealt with Little League, but there is a divergence of opinion regarding interscholastic competition for junior high school children.

Very recently one very noted authority, Dr. Oberteuffer of Ohio State University, in discussing the reason there is junior high school football said: "The American public should know that there are really only two reasons why football has been pushed down into the lower grades where it does not belong! One, so that lower grade teams can be used as a farm system for high school and college varsities; and, second, so that more expensive football gear can be sold by the commercial sport goods houses."

Dr. Elmer Mitchell, one of the most widely known men in the physical education profession, does not agree with the first of Dr. Oberteuffer's arguments for he says: "Moreover, the value of the present policy of concentrating on a few in order

(Continued on page 55)

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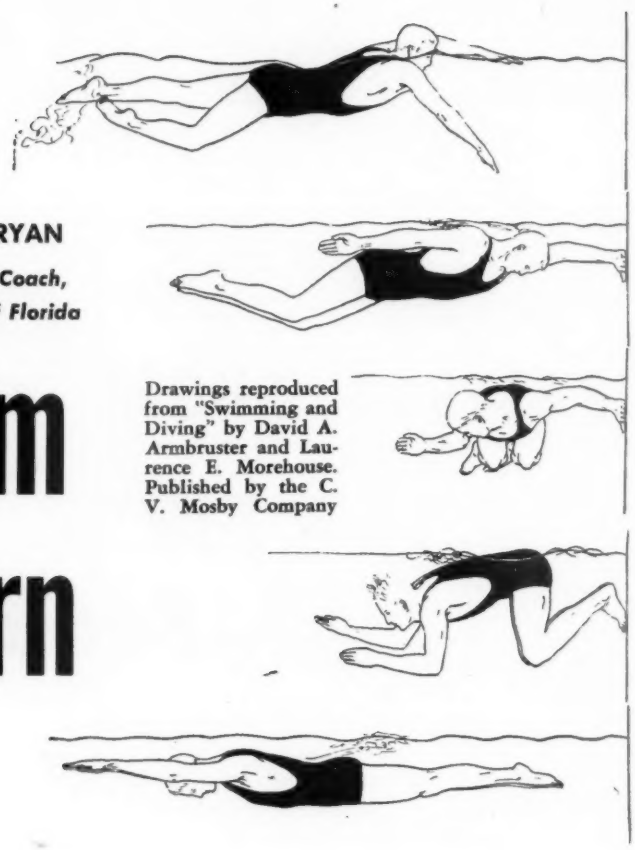
JACK RYAN competed at Ohio State in 1942, '43, and '47 and was a member of the All-American team in the 200, 440, and 1500 meter free style events. In 1947 he was a member of the 800 yard relay team that holds the world's record. Ryan is starting his third season at Florida which last year won the Southeastern Conference championship.

By JACK RYAN

Swimming Coach, University of Florida

Teach Them How To Turn



Drawings reproduced from "Swimming and Diving" by David A. Armbruster and Laurence E. Morehouse. Published by the C. V. Mosby Company

THE art of turning in a swimming pool is often thought of as a skill that is the exclusive property of the competitive swimmer. As we sit in the stands during a swimming meet we are amazed at the speed and precision a swimmer shows when he makes a good turn during his race. By the same token we are extremely critical of him when he does a turn that seems slow, poorly executed or one that does not allow him to resume the proper swimming position in the water. For the competitive swimmer, the turn is essential and he must know this aquatic skill perfectly if he is to win his share of races. He must also be able to execute the turn in a variety of ways since the type turn he uses will vary with the distance of the race or the situation at hand. Many times a close race can be won or lost by a turn rather than the proverbial nose.

However, for our swimming classes the art of turning has a different but definite meaning. It is by no means an essential skill, nor do speed, precision, and the knowledge of a variety of turns receive the same emphasis they do in the case of the competitor. Our objective in a swimming class is not to train or develop a swimming champion, but rather to offer to the student the opportunity to acquire an assortment of aquatic skills that will be useful to him. Since the vast majority of educational institutions which offer swimming as a part of their physical education program do so in a swimming pool, the skill of turning should be a part of any swimming course. Knowledge of proper turning will help the swimmer in many ways. First of all, when the swimmer swims two or more laps of the pool he will be able to turn with a minimum of effort. Second, an opportunity to make his turn without the loss of relaxation will be offered him, and, finally, he will be enabled through a good push and glide to return to the surface of the water in a proper swimming position and have the ability to resume the co-ordination of his stroke without loss of rhythm.

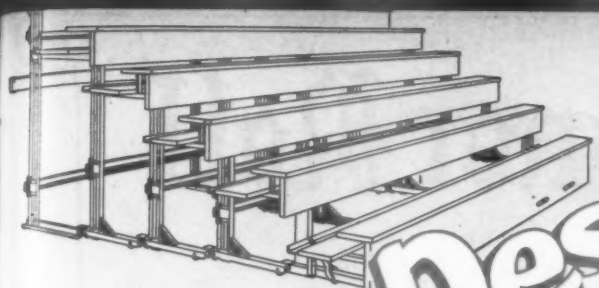
Of the various type turns in use at the present time, the easiest one to teach in a class situation is the open or over-water turn. This type turn has the most value for the ordinary swimmer since it allows him to catch a breath of air before pushing off and it is also a turn which can be executed with little effort.

Teaching the Open Turn

In all of our drill activities and in teaching aquatic skills, we are concerned with breaking the skill down into various parts so that through a series of progressive techniques we arrive at the desired skill in its completed form. With this principle in mind the following progression of learning has been found to be successful in teaching the open turn: 1. Position on the wall, push and glide. 2. Gliding into the wall and assuming a starting position. 3. Kicking into the wall, turning and pushing off. 4. The complete swimming turn.

1. *Position on the wall, push and glide*: The ability of the swimmer to be in a correct position to push off from the wall is of primary importance in turning. If this point is stressed at the outset, the student will be given the opportunity to practice assuming the position and it will help him get the feel of the way his body should lie prior to the push-off. Being in a correct position will be of value to the student when he actually starts to make the complete turn. To begin, the swimmer is instructed to

(Continued on page 44)



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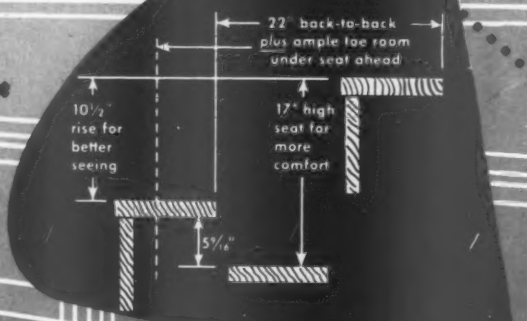
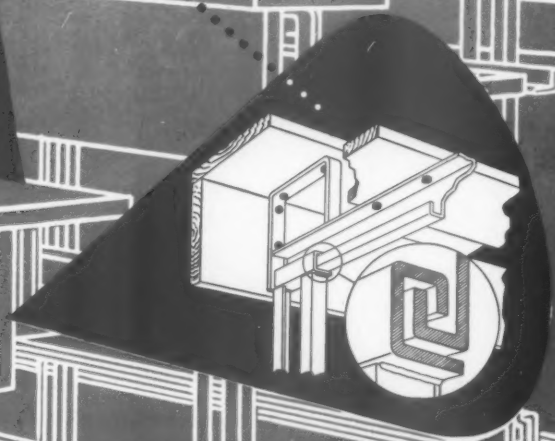
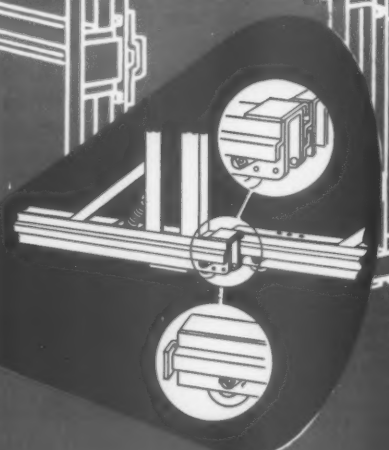




NEW! interlocking members and multiple supports make opening and closing easy —assure true alignment and prevent binding



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National Honor Roll

Competitor and School	Meet	Time
100-Yard Dash		
King (Delano, Calif.)	State	9.6
Goodloe (Baylor, Chattanooga, Tenn.)	Baylor Relays	9.7
Gordon (Johnson, Baltimore, Md.)	C.I.A.A. Scholastic	9.7
Lewis (Montclair, N. J.)	State	9.8
Swisshelm (Santa Ana, Calif.)	Chaffey Inv.	9.8
Whilden (Houston, Texas)	Houston Relays	9.8
Ferrell (Jordan, Columbus, Ga.)	State	9.8
Halpern (New Rochelle, N. Y.)	Intersectional	9.8
McGuiness (Jamestown, N. Dak.)	State	9.8
Hagaman (Rochester, Minn.)	District	9.8
220-Yard Dash		
Lewis (Montclair, N. J.)	State	21.0
Swisshelm (Santa Ana, Calif.)	So. Section Semi-Final	21.3
King (Delano, Calif.)	Yosemite League	21.3
Goodwin (Rumson, N. J.)	Shore Conference	21.4
Gould (Newton, Mass.)	State	21.4
Hall (Edison, Fresno, Calif.)	Yosemite League	21.5
Risinger (Alhambra, Calif.)	So. Section	21.5
Rawls (Lanier, Montgomery, Ala.)	State	21.5
McGuiness (Jamestown, N. Dak.)	State	21.5
440-Yard Dash		
Jenkins (Rindge Tech., Cambridge, Mass.)	State	48.2
Carter (Orange, Calif.)	Compton Cup	48.9
Peters (Brenham, Texas)	State Prelim.	48.9
Emerson (Richmond, Calif.)	State	49.2
Simpson (Cheltenham, Pa.)	District	49.2
Ward (Marion, Ind.)	State	49.2
Frazier (Ada, Okla.)	State	49.2
Gilbert (Port Jervis, N. Y.)	Intersectional	49.6
Tate (Casa Grande, Ariz.)	Luke Greenway Inv.	49.6
880-Yard Run		
Caraftis (Port Jefferson, N. Y.)	Intersectional	1:56.7
Bowden (Lincoln, San Jose, Calif.)	Peninsula League	1:57.0
Clynes (Watertown, Mass.)	State	1:57.8
Ellis (Compton, Calif.)	So. Section Semi-Final	1:58.0
Pratt (Palmyra, N. J.)	State	1:58.2
Porter (New Bedford, Mass.)	Brown Inter.	1:58.4
Smith (North, Des Moines, Iowa)	Big Six Conference	1:58.4
Houghton (University, Los Angeles, Calif.)	City	1:58.5
One Mile Run		
Seaman (Reedley, Calif.)	State	4:21.0
Sweikart (Whittier, Calif.)	So. Section Quarter Final	4:24.9
Buchanan (Stillwater, Okla.)	Duncan Inv.	4:26.0
Barry (North Tarrytown, N. Y.)	Intersectional	4:26.2
New (Central, Muncie, Ind.)	State	4:26.3
Pitchers (Equality, Ill.)	District	4:26.5
Jones (Boys Town, Nebr.)	Shenandoah Relays	4:27.5
Zitny (Fordson, Dearborn, Mich.)	State	4:28.8
Low Hurdles		
Perry (Coatesville, Pa.)	State	18.8
Armstrong (Manual Arts, Los Angeles, Calif.)	State Prelim.	18.9
Derrick (Woodward, Okla.)	State	19.0
Burton (Northern, Flint, Mich.)	State	19.1
Johnson (Kingsburg, Calif.)	No. Calif. Jr. Olympics	19.2
Upshaw (Piedmont, Calif.)	State	19.3
Adams (Garfield, Akron, Ohio)	State	19.4
Williams (Springfield, Ohio)	State	19.4
Ornduff (Southwest, Kansas City, Mo.)	State	19.4
Miller (Bell, Calif.)	State Prelim.	19.4
Caffey (Lyons, LaGrange, Ill.)	State	19.4

Competitor and School	Meet	Time
High Hurdles		
Holup (Perth Amboy, N. J.)	State	14.1
Roberts (Stillwater, Okla.)	State	14.1
Perry (Coatesville, Pa.)	State	14.1
Daniel (Yuma, Ariz.)	Arizona Relays	14.2
Healey (Keppel, Alhambra, Calif.)	State	14.4
Adams (Garfield, Akron, Ohio)	State	14.5
Frazier (Ada, Okla.)	Regional	14.5
440-Yard Relay		
Brenham, Texas	State	43.0
Ray, Corpus Christi, Texas	Regional	43.2
Stephen F. Austin, Houston, Texas	Regional	43.2
Lamar, Houston, Texas	Houston Relays	43.2
Cranford, Pa.	Penn Relays	43.7
Amarillo, Texas	West Texas Relays	43.8
Arlington Heights, Fort Worth, Texas	Regional	43.8
Delano, Calif.	Kern Relays	43.8
One Mile Relay		
Lyons, LaGrange, Ill.	West Suburban Conf.	3:21.2
Baytown, Texas	State	3:22.5
Froebel, Gary, Ind.	State	3:24.7
Capitol Hill, Oklahoma City, Okla.	State	3:25.5
St. Augustine's, Brooklyn, N. Y.	Penn Relays	3:26.6
New Trier, Winnetka, Ill.	Suburban League	3:27.5
Friona, Texas	State	3:27.6
Byrd, New Orleans, La.	State	3:27.8
880-Yard Relay		
Manual Arts, Los Angeles, Calif.	State	1:27.6
Jefferson, Los Angeles, Calif.	State Prelim.	1:28.7
Fremont, Los Angeles, Calif.	State Prelim.	1:29.0
Philips, Chicago, Ill.	District	1:29.8
Santa Ana, Calif.	So. Section Semi-Finals	1:29.9
Rindge Tech., Cambridge, Mass.	State	1:30.3

Field Events	Meet	Distance
Pole Vault		
Morris (Burroughs, Burbank, Calif.)	Foothill League	13-11⅛
Bragg (Penns Grove, N. J.)	Princeton Inv.	13-5⅜
Donnell (Franklin, Los Angeles, Calif.)	No. League	13-3½
McBride (Refugio, Texas)	San Antonio Inv.	13-2
Foss (Santa Barbara, Calif.)	S. Section Finals	13-1½
Hightower (San Jose, Calif.)	No. Calif. Jr. Olympics	13-¾
Scott (Auburndale, Fla.)	State	13-0
Voiles (El Monte, Calif.)	Pacific League	12-10¼
Broad Jump		
Tate (Casa Grande, Ariz.)	Luke Greenway Inv.	23-10⅜
Nelson (Pacific Grove, Calif.)	No. Coast Section Semi-Finals	23-7
Horridge (New Orleans, La.)	S.E. Louisiana Relays	23-6
Upshaw (Piedmont, Calif.)	State	23-5
Gamble (Jordan, Los Angeles, Calif.)	State	23-4⅞
Turner (San Bernardino, Calif.)	Orange Show Relays	23-¼
Johnson (Kingsburg, Calif.)	No. Calif. Jr. Olympics	23-¼
Roldan (Orosi, Calif.)	Central Section Semi-Final	22-11¾
Daniel (Yuma, Ariz.)	State	22-11⅜

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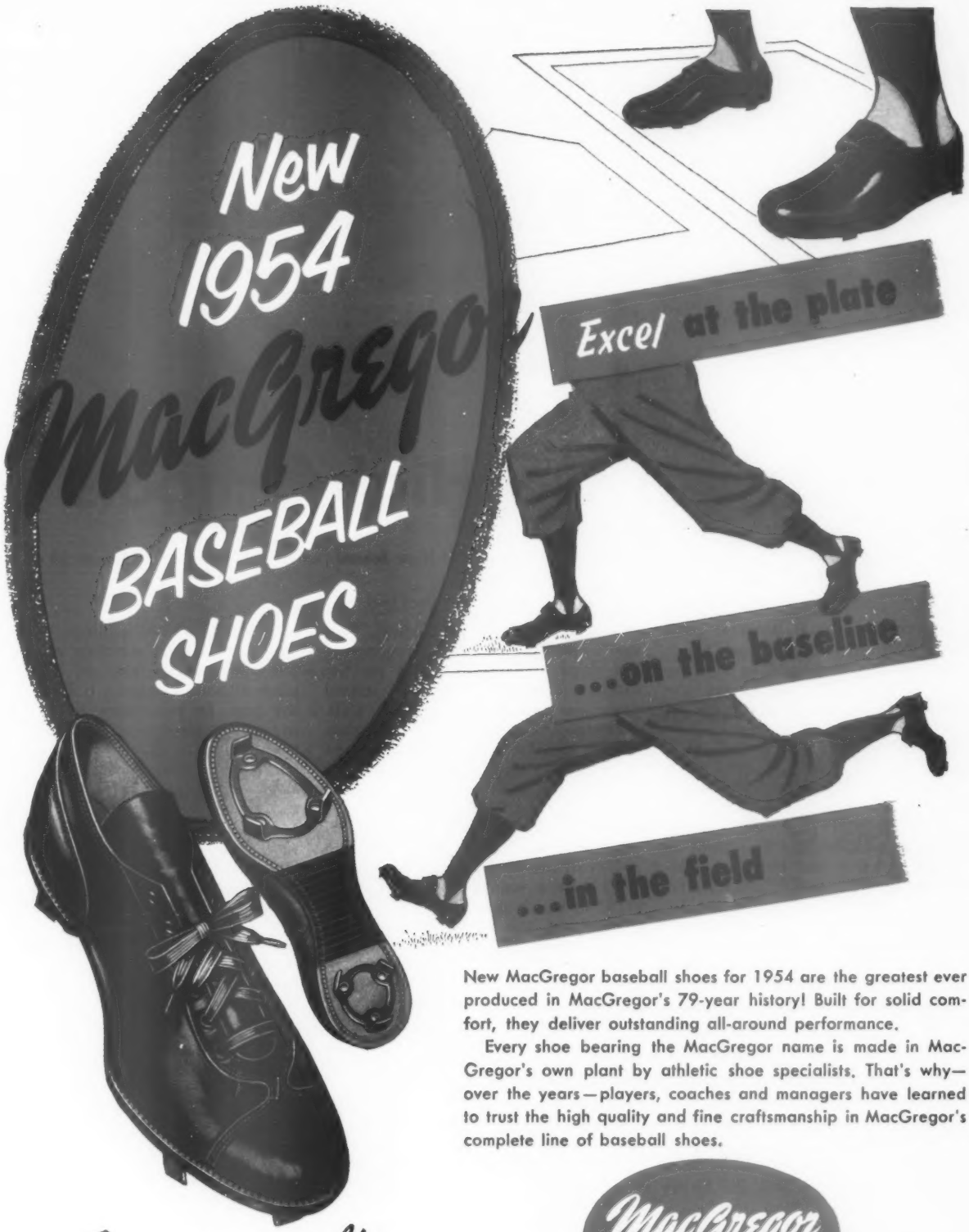
Compiled by E. A. THOMAS



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Competitor and School	Meet	Distance
High Jump		
Dailey (Hayward, Calif.)	No. Coast Section	6-4¼
Nelson (Hoover, San Diego, Calif.)	State	6-4
Barksdale (Norristown, Pa.)	District	6-4
Benton (Deming, New Mex.)	District	6-3¾
McDonald (Philips, Texas)	Regional	6-3½
Carder (Perry, Kans.)	Ottawa Relays	6-3½
Shipley (Hempstead, N. Y.)	Intersectional	6-3¼
Shot Put		
Vick (Chaffey, Ontario, Calif.)	Citrus Belt League	62-5¼
Martin (Van Nuys, Calif.)	L. A. City Prelim.	58-0
Moad (Medford, Ore.)	State	57-8½
Geremia (McClatchy, Sacramento, Calif.)	State	57-7¼
Johnson (DeLeon, Texas)	State	57-5½
Wright (Jefferson, Los Angeles, Calif.)	So. League	57-4
Everage (Jordan, Los Angeles, Calif.)	City	57-2¼
Self (Sunset, Dallas, Texas)	District	57-1

Competitor and School	Meet	Distance
Discus Throw		
Crow (Porterville, Calif.)	Kern Relays	174-11½
Vereen (Miami, Fla.)	State	173-4½
Nelson (Hurley, S. Dak.)	Big Seven	163-6
Roban (Great Falls, Mont.)	State	162-8½
Schmitt (Taft, Calif.)	Central Section	162-8
Kusch (Delano, Calif.)	Yosemite League	161-10
Bianchi (Clovis, Calif.)	Sequoia League	161-0
Harville (Odessa, Texas)	West Texas Relays	160-11
Yonkey (Wells, Minn.)	State	160-0
Javelin Throw		
Salvatore (G.A.R. Wilkes Barre, Pa.)	State	190-8
Ellis (La Connor, Wash.)	District	189-4
Bingham (Medford, Ore.)	State Prelim.	187-0
Ruth (Lansdale, Pa.)	Princeton Inv.	184-7¾
McLendon (Cranford, N. J.)	State	182-0
McAdoo (El Dorado, Kans.)	Regional	181-¼
Ladner (Brentwood, Pa.)	District	180-5¼
Martin (Lake Washington, Kirkland, Wash.)	State	180-3

Track in the High Schools

National High School Track Meet Appears on Pages 28 and 29

THE eighth annual Athletic Journal National High School Track Meet has been conducted, as have the previous meets, by combining the results of the various state meets held last spring into one large meet. The scoring follows the NCAA procedure of awarding 10, 8, 6, 4, 2, and 1 points for the first six places. By way of explanation of the meet which appears on page 28 and page 29, a solid red block indicates the best time or distance and diagonal red lines indicate a tie between two or more states. New state records are indicated by a star.

The continued improvement of track and field performances was clearly evidenced when 73 new records were set. This is a tremendous improvement over last year's high of 56. The pendulum of track power continues to swing toward the East. Last year Maine set seven new records for a new mark. This year's meet sees Massachusetts moving out in front with nine records set in one meet. Since the beginning of the meet, New Mexico has written 17 new marks on her books.

California First Again

For the first two years of the meet California was first by a small margin of points. The third meet was won by Texas, the only state to break California's hold on first place. From that time until this year's meet California has won by overwhelming margins of 44, 41, 40, and 52 points. This year's meet saw California registering her third highest total and yet the margin between first and second place was reduced to 25 points. California's all-time high was 94¾ points in the 1951 meet and her margin of 53½ points that year was also the largest.

Texas' second place total of 64 points is exceeded only by California's second place total of 66 5/6 points in the 1949 meet.

California scored points in every event in which she competed. In fact, throughout the eight years of the meet, California has scored in 83 out of a possible 95 events. The seven firsts for California this year, combined with the previous 30, mean that she has won 39 per cent of the events in which she competed. California now has a total point score of 623 points.

Before proceeding with the point totals we wish to correct an error in the scoring of the meet a year ago. We failed to credit New York with a tie for first place in the 220-yard dash. This error was pointed out to us by Albert Herschel and the correction has been made in the following totals.

There was no change among the first ten states although there were two shifts in position. Texas moved into second place with 314 points and Ohio, who only registered 1 5/6 points, dropped to third with a total of 251 2/3 points. Illinois, likewise, scored a limited number of points but managed to hold on to fourth place although Indiana is fast closing the gap. In two years Indiana has narrowed Illinois' lead from 29 points to five points. The point totals are Illinois 221 and Indiana 216. New York scored 113 points in the first six meets. 73 in the last two, and is a very strong sixth with 186. Two years ago Iowa was sixth and last year was pushed into seventh place by fast-moving New York. This year New Jersey moves into the seventh spot with 159 points. Iowa's eighth spot total of 136 points is threatened by up and coming Oklahoma. Oklahoma has scored 45 per cent of her 123 points in last year's and this year's meets. Pennsylvania strengthened her hold on tenth place by scoring 23 points and now has a total of 119½ points.

The accumulated point totals for the balance of the states with their rank in parentheses are as follows: (11) Wisconsin 80½; (12) Oregon 76; (13) Missouri 74; (14) Massachusetts 71; (15 tie) Washington 68; (15 tie) Kansas 68; (17) Colorado 67; (18) Arizona 43½; (19) Connecticut 40; Louisiana and Virginia tied for 20th place with 35 points; (22) Michigan 34; (23) Florida 28; Minnesota and Nebraska tied for 24th place with 23 points; (26) Montana 19; (27) Utah 18; (28) Idaho 15; (29) Tennessee 14;

(Continued on page 52)

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National High School Track Meet

STATE	120 High Hurdles	100 Dash	Mile	880 RELAY	440	180 LOWS	880	220 DASH	POLE	SHOT	HIGH	DISCUS	BROAD	JAVELIN (b)	TOTAL
ALA.	★14.8	10.0	4:36.0	1:32.5	★50.0	★20.4	2:02.3	★21.5 1½	11-0	45-4½	★6-3⅜	141-0	20-10⅝		1½ (25)
ARIZ.	14.5 ½	10.1	4:36.1	1:31.3 1	51.6	20.0	2:01.9	22.0	12-3	52-4	5-11	144-9¼	22-11⅜ 6		7½ (14)
ARK.	15.3	10.2		1:32.4	52.4	20.3	2:04.5	21.8	11-8	50-3½	5-11	144-1	★21-9⅜		
CALIF.	14.4 2	[illegible] 9	★ [illegible] 10	★ [illegible] 10	49.2 4	19.3 2	1:57.1 8	21.4 5	[illegible] 10	[illegible] 10	[illegible] 10		[illegible] 9		89 (1)
COLO.	15.7	10.3	4:50.9	1:34.9	52.7	21.4	2:07.5	23.0	12-0	49-10	6-0	147-6½	21-10		
CONN.	17.1	9.9	4:40.2	1:34.2	50.8	22.0	2:02.5	21.6	11-0	48-0½	5-11	137-10	21-4½	157-0	
DEL.	No state meet														
D.C.	16.3	10.8	4:46.7	1:35.1	50.2	22.0	2:02.0	23.7	10-6	44-3	5-6	129-4¼	20-7¼		
FLA.	★14.9	10.0	4:40.0	1:31.5	51.6	20.4	2:04.1	22.5	★13-0 6	52-1	6-1	★ [illegible] 10	21-11		16 (8)
GA.	★14.8	★9.8 1¾	4:33.2	1:33.5	52.0	20.0	2:03.2	22.5	12-0	50.9	5-10½	153-6¾	★22-3½	177-11	1¾ (21)
IDA.	15.4	10.2	4:42.4	1:34.2	51.5	20.9	2:02.9	22.9	11-1¼	47-11½	5-9½	133-2¾	21-0		
ILL.	14.6	10.0	4:32.1	1:32.2	50.2	★19.4 ⅓	2:00.3	22.0	12-6	54-¾	6-2¾ 4	155-6⅝ 2	21-3¾		6⅓ (15)
IND.	15.4	10.2	4:26.3 6		★49.2 4	20.4	2:00.2	22.1	12-2½	★55-7 2	6-0⅛		22-1⅜		12 (10)
IOWA	15.0	10.0	4:32.0	1:31.2 2	50.7	20.3	2:02.0	22.4	12-1¾	49-9	6-0¼	143-4	21-8¾		2 (21)
KANS.	14.8	10.3	4:41.7	1:34.3	52.5	20.2	2:04.1	22.5	11-11½	52-5⅝	6-3 6	152-8	22-7⅛ 4	179-10¾	10 (11)
KY.	16.2	10.4	4:59.7	1:38.8	54.4	21.3	2:08.6	22.8	9-6	★51-1¼	5-7	131-8¾	21-5½		
LA.	14.8	10.2	4:40.2	1:31.5	51.2	20.0	2:03.1	22.0	11-8	54-4	5-10	★152-3	22-6 2	168-8	2 (21)
ME.	16.3	10.7	4:37.7	1:36.5	53.2	21.3	2:07.4	23.4	10-3	45-9⅜	5-10¼	134-1½	20-10¼	178-5	
MD.		10.1	4:42.3	★1:34.9	52.4		2:08.7	★22.3	10-3	48-8½	★5-10	135-10	20-11¾		
MASS.	★14.8	10.2	4:31.8	★1:30.3 8	★ [illegible] 10	★19.7	1:57.8 6	★21.4 5	★12-0¼	★55-0¾ 1	5-11¼	★136-6¾	21-8¾	★167-2	30 (5)
MICH.	15.2	9.9	4:28.8 4	1:31.0 6	50.7	★19.1 4	1:59.9	★21.7	11-11	★54-8½	6-0⅝		21-2		14 (9)
MINN.	15.3	10.1	4:32.9	1:32.2	★50.5	★20.0	2:01.1	22.6	★12-2¼	★54-10¾	5-11¼	160-0 6	22-1¼		6 (16)
MISS.	★15.1	10.2	4:34.7	1:34.3	52.2	20.8	2:05.6	22.9	11-10	49-3½	6-0⅝	129-0½	21-1½		
MO.	15.2	10.1	4:34.8	1:33.1	50.8	★19.4	2:02.8	22.0	12-2¾	54-3¾	5-11½	148-10¾	21-7		¼ (22)
MONT.	15.7	10.1	4:42.2	1:33.5	50.9	20.5	2:03.9	22.6	11-8½	51-8¾	6-1½	163-9½ 8	20-9¼	175-5	8 (12)

MINN.	15.3	10.1	4:32.9	1:32.2	★50.5	★20.0	2:01.1	22.6	★12-2¼	★54-10¾	5-11¼	160-0 6	22-1¼		6	
MISS.	★15.1	10.2	4:34.7	1:34.3	52.2	20.8	2:05.6	22.9	11-10	49-3½	6-0⅝	129-01½	21-11½			
MO.	15.2	10.1	4:34.8	1:33.1	50.8	★19.4	2:02.8	22.0	12-2¾	54-3¾	5-11½	148-10¾	21-7		½	
MONT.	15.7	10.1	4:42.2	1:33.5	50.9	20.5	2:03.9	22.6	11-8½	51-8¾	6-1½	162-8½ 8	20-9¼	175-5	8	(19)
NEBR.	15.1	10.3	4:31.6	1:33.3	50.5	20.6	2:00.7	22.9	★12-9¾ 4	52-1⅜	★6-2½ 1	154-2¾	22-5¼ 1		6	(16)
NEV.	15.7	10.1	4:53.7	1:34.8	52.4	★19.9	2:10.5	22.0	11-11¾	51-2½	★6-0⅜	★46-2⅞	20-6½			
N.H.	16.1	11.0	4:37.1	1:37.6	53.5	21.2	2:02.8	24.2	10-6	50-7	5-10	130-10¾	20-¼	159-2⅛		
N.J.	★14.4 6	★9.8 1¾	4:29.8 1		49.8	19.8	1:58.2 4	★21.0 8	★13-0½ 8	52-6	6-2	154-8¼ 1	22-1¾	182-0	31¾	(4)
N. MEX.	★14.8	10.0	4:44.7	★1:31.6	52.4	★19.5	2:06.2	22.2	11-7	48-0½	5-10¾	★52-4¾	21-1¾	178-5½		
N.Y.		9.8 1¾	4:26.2 8	1:31.1 4	49.6 1	20.1	★1:56.7 10	21.7	11-8	50-11	★6-3¼ 8	150-3	22-2¼		32¾	(3)
N.C.	15.6	10.3	4:31.9		52.3	21.2	2:04.6	23.0	10-9	52-11	5-11	150-10⅝	21-2½	170-8¾		
N.D.	15.4	9.8 1¾	4:48.8	1:35.8	53.1	20.4	2:07.0	21.5 1½	10-6	50-11½	5-8¾	142-5	20-7	165-1	3¼	(20)
OHIO	14.5 ½	10.1	4:30.5	1:32.4	50.2	19.4 ⅓	1:59.4	22.3	12-8 1	54-9	6-1½	150-2½	21-2		1 5/6	(23)
OKLA.	★14.4 5	10.0	4:30.7	1:31.7	49.2 4	★19.0 6	2:01.1	22.1	12-2	54-1¼	6-0¼	146-0¾	21-9¾		18	(7)
ORE.	15.5	10.1	4:33.0	1:32.1	49.9	20.7	2:02.5	22.9	12-1	57-8½ 8	5-11½	151-8	21-6¾	177-4	8	(12)
PA.	★14.4 5	9.7 6	4:35.1	1:35.0	49.9	★18.8 8	2:01.5	21.7	12-4½	52-7½	6-2½ 1	148-2⅞	21-0¼	190-8	23	(6)
R.I.	No state meet															
S.C.	15.6	10.1	4:50.0	1:34.1	53.7	21.1	2:11.1	22.4	11-0	49-0	5-9⅛	133-6¼	20-4	161-3½		
S.D.	★14.9	10.1	4:41.7	1:32.6	53.1	★19.8	2:04.9	23.0	★12-0	48-7	5-10	152-8¾	21-10¼			
TENN.	15.7	10.3	4:41.2	★1:32.4	★50.1	★20.5	2:05.6	22.6	11-0	48-3¾	5-11	142-7	21-4			
TEXAS	14.3 4	★9.6 9	4:30.7		★48.9 8	★18.5 10	1:59.2 1	★20.7 10	12-9 2	57-5½ 6	6-2½ 1	156-3¾ 4	★23.4 9		64	(2)
UTAH	14.9	10.0	4:37.7	1:34.1	52.4	20.6	2:04.0	23.2	12-0	★52-11⅜	5-11½	149-8½	22-0	163-8		
VT.	15.8	10.4	4:47.7		52.9	21.7	2:05.2	23.7	11-6	50-11½	5-6¼	136-4¼	20-2	167-2		
VA.	15.6	10.5	4:32.5	1:38.8	52.1	20.5	2:05.2	23.4	11-6	52-1¾	5-9¼	136-0½	20-10¼			
WASH.	14.9	10.2	4:29.5 2	1:31.7	50.2	20.6	1:59.1 2	22.7	12-3	52-9¼	6-1¾	142-4⅞	21-9⅛	180-3	4	(18)
W. VA.	15.4	10.2	4:41.7	1:33.9	51.9	20.5	2:01.7	22.7	★12-1	47-11½	5-10½	140-3¼	20-10¾			
WISC.	14.6	10.1	4:37.8	1:32.7	52.2	(a) 23.5	2:03.6	(c) 20.7	12-4	56-1½ 4	6-1½	146-3	22-3½		4	(18)
WYO.	15.5	10.1	4:47.5		★51.5	21.4	2:04.7	22.9	11-6	51-9¼	5-8	★48-10¾	20-10¾			

(a) Wisconsin runs the 200-yard low hurdles. (b) No points awarded for javelin because less than half the states have this event. (c) Wisconsin runs the 220-yard dash.

By W. HAROLD O'CONNOR
Track Coach, Concord, Massachusetts, High School

Is Your Track Team Ready?

WHEN he is watching his star win a race, clear a bar, or toss a weight, every real track coach is likely to find himself wondering, "Has that boy reached his peak? His next thought may very likely be, "If this is his peak, how long can he be kept there?" During a quarter of a century of coaching we have seen many boys whom we considered ready for top performances compete in a manner that made us wish we were selling life insurance, especially to coaches. On the other hand, we have seen some boys who had, in our estimation, reached their absolute limit, only to have them thrill us with an effort that we recognized as better than any we could hope to see. Then we are happy to be coaching track. But when the team, and especially the boy in question rushes up to us aglow with the flush of unexpected victory and congratulates us for some great coaching, we accept it the way all coaches do but we wonder. What did we do to get that boy ready for that unexpected performance? Did *we really get him ready for a top effort, or, what may be more important, has he now reached his peak?*

If a coach would like to give himself a real puzzle, he should select any event on his track program, then prepare the work schedule suggested by any dozen coaches for that event. Then he should ask himself which of these schedules, if any, will prepare a boy for his best performance. We are sure that such speculation will convince the coach that there can be no panacea for the faults of all quarter-milers, all hurdlers, all high jumpers, or all shot putters. The coach is bound to conclude that his boy is his own problem. Then he looks at the fine performances turned in by boys coached in the same event by this same group of coaches and he asks himself, What's the answer? Their training plans are all different, but their boys all win, and even break records. When is a runner ready? What determines his readiness? How much can a boy be reasonably expected to improve?

Let us hasten to say that even after twenty-five years of coaching, we have not found all of the answers. If we had, we would be the most sought-after coach in the country. However, we do think we have found a few of the answers, and maybe they will be of assistance to other track coaches.

Let us consider sprinters first since they are the backbone of almost every track team. When a sprint prospect reports for his first trial as a high school freshman or sophomore and he is clocked in about 11 seconds for a 100 or 26 seconds for a 220 around a turn, what has a coach the right to expect before the boy graduates? Could he be a 10 second man in the rough or hit 22 seconds in a 220 straightaway? Chances are about 1000 to one that he will never do either. If a coach is able to bring that 11 second man down to 10.3 by the time he graduates, he has done a coaching job. It is much more reasonable to expect an improvement of five-tenths of a second. After checking the sprinter's time for 50 yards the coach will have the key to the boy's possibilities.

It should be remembered that sprinters show speed before they reach high school. Real sprinters start running away from the other boys in the elementary school. When they reach high school they either have speed or they have not. A coach can teach them to start and cut a fifth of a second off their time. He can teach them to relax and save another fifth of a second, and then maybe he can get another tenth by making them reach for a better stride. From that point the challenge of competition and the desire to win may chop off another tenth of a second or two and that is all. We have studied the times of many schoolboy sprinters, and an improvement of five-tenths of a second in the 100 is mighty good during four years in high school. An improvement of seven-tenths of a second is rare. Seldom is it achieved.

Bringing the time of the 220 man down is a little different matter. Here again, the coach must check the boy's best time at 100 yards to determine his possibilities in the furlong. If the boys cannot break 11 seconds in the 100, the coach's dreams are in vain if he hopes to get the sprinter down to 23 in the 220. The boy can be taught to start, to stride, and to relax, but the coach cannot give him speed. Some coaches claim that sprinters keep improving until they reach the age of 25 or 26. We do not believe it. Name almost any great college sprinter of the past twenty years and we will show that his high school records are invariably within a tenth of a second or two of his best performances in college, if the boy ran in high school, as most of them did. Furthermore, the better the time the boy did in high school the narrower his improvement is likely to be. We heartily agree with Ken Doherty of the University of Pennsylvania in his claim that none of the greatest improved more than two-fifths of a second during his career.

Now, the coach should consider his own prospect. What is his best time? If it is 11 seconds, aim at 10.5 and be happy if the boy makes it. If he can hit 10.3, the coach can settle for 10 seconds tops and be a very good coach. We can all dream, and so can the grandstand coaches, but a boy cannot dream his way through the 100. He has to run it.

A great many coaches are realizing that a boy's natural speed limits his

(Continued on page 42)

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In Basketball

The Plus-Minus Chart

By BOBBY C. WATSON
Head Coach, Crawfordsville, Arkansas, High School

WITH statistics rapidly becoming the rule rather than the exception in modern basketball, coaches must seek simplification in charting the various phases of the game. We use one composite chart that is called the plus-minus chart. This chart does the work of several individual charts. Rather than keep a half-dozen separate charts requiring the services of several trained persons, we are able to have one person do all of the work.

The plus-minus chart derives its name from the symbols used in it. Many of the ideas for the chart came from Pressley Askew, former University of Arkansas basketball coach. With this chart we can determine: the total number of times our team has had possession of the ball; the number of times our team has lost possession of the ball; the number of shots each player takes from the field; the number of successful field goals each player makes; the method of loss of possession by each player; and what defense we are most successful against.

The plus-minus chart is simple in its application and any basketball-minded student can do the job. We have used the chart for four years and it has proved invaluable to us in teaching methods, compilation of records, and research work.

Possession

Each time our team gains possession of the ball in any manner a minus is placed on the chart. By charting this particular phase of the game we can obtain a definite knowledge of the number of times we have had the ball in our possession and how many times we failed to take advantage of this fact. Then too, if we have had possession too few times in the early stages of a game due to playing a certain type of offense, we can step up the tempo during the latter part of the game in order to get the ball more often.

Shooting Averages

By placing a diagonal line through the minus sign, we change it to a plus sign, which indicates that a player on our team has taken a shot at the basket. The player's jersey number is placed alongside the symbol to identify the shooter.

If the shot is successful, a circle is drawn around the plus sign. From this symbol we can determine the players and the team's shooting percentage, in what part of the game we get most of our shots, and in what part of the game we are most successful with our shooting. A notation on the side of the chart will indicate what type of defense our opponent is using and a glance at the shooting symbols will tell us how effective we were against the various types of defenses.

Loss of Possession

With the various symbols it is possible to tell which player is hurting our offense by losing the ball and by what method he is doing it. We use the following symbols to indicate loss of possession: VT—traveling, BP—bad pass, F—fumble, PF—personal foul, TF—technical foul, HB—held ball, V3—violation three second rule, V5—violation five second rule, V10—violation ten second rule, BC—back across the center line, OB—out-of-bounds, DD—double dribble.

Chart 1 shows the plus-minus chart which covers a portion of an actual game played last season.

Chart 1

	Crawfordsville vs. West Memphis		
	1. X 40		63. X 35
	2. (X) 35 *		64. X 20
3-2	3. X 20	man—	65. (X) 20
zone	4. X 20	for—	66. X 20
	5. X 40	man	67. — 30 **
	6. — 30 BP		68. — 23 VT
	7. — 50 F		69. X 10

Notice that in Chart 1, X represents a plus mark, the parentheses represent a circle around the plus mark, and the asterisks represent a circle with a line through it, denoting a successful free throw.

The key to Chart 1 is as follows: 1. No. 40 shoots and misses; 2. No. 35 shoots successfully, is fouled, and makes one free throw; 3. No. 20 misses; 4. No. 20 misses; 5. No. 40 misses; 6. No. 30 loses possession by a bad pass; 7. No. 50 loses possession by a fumble; 63. No. 35 misses; 64. No. 20 misses; 65. No. 20 scores; 66. No. 20 misses; 67. No. 30 is fouled and makes two free throws; 68. No. 23 loses the ball through traveling; 69. No. 10 misses. If the opponents have possession of the ball and foul, a symbol is not placed on the chart.

After the game a duplicate of the chart is made up, and we substitute the players' last names for their numbers. One copy is posted on the bulletin board, while the other is filed in a special notebook for future reference. The players may observe how

(Continued on page 52)

Chart 2

Opponent West Memphis 55 to 35

	Shots Att.	Shots Made	Perct.	F.T. Att.	F.T. Made	Perct.	Fouls	Tot. Pts.	Viol.	Ball-Handl.
C. Briggs	6	2	.333	4	0	.000	4	4	2	3
total	159	56	.352	85	36	.424	47	148	17	41
Rogers	13	7	.538	1	1	1.000	3	15	1	0
total	147	54	.368	88	46	.523	56	154	13	51
A. Briggs	11	4	.364	18	9	.500	4	17	2	2
total	214	100	.467	138	54	.391	57	255	22	45
Landrum	4	1	.250	9	5	.556	2	7	2	1
total	154	43	.279	71	40	.564	50	126	28	48
Glenn	6	2	.333	0	0	.000	5	4	1	1
total	80	20	.250	53	22	.406	48	62	10	62
Moratti	4	2	.500	8	3	.500	2	7	5	2
total	142	59	.415	85	43	.506	30	161	28	58
Ellis	1	0	.000	2	1	.500	1	1	1	0
total	7	0	.000	16	7	.438	15	7	3	5
W. Mps.	45	18	.400	40	19	.475	21	55	14	9
total	904	832	.367	538	249	.463	304	913	141	310

BOB WATSON lettered in basketball at Arkansas State College, graduating in 1950. This is Watson's fourth year of coaching. All of this time has been spent in Arkansas schools. His teams have won two county championships and one district title. Watson is also football coach.

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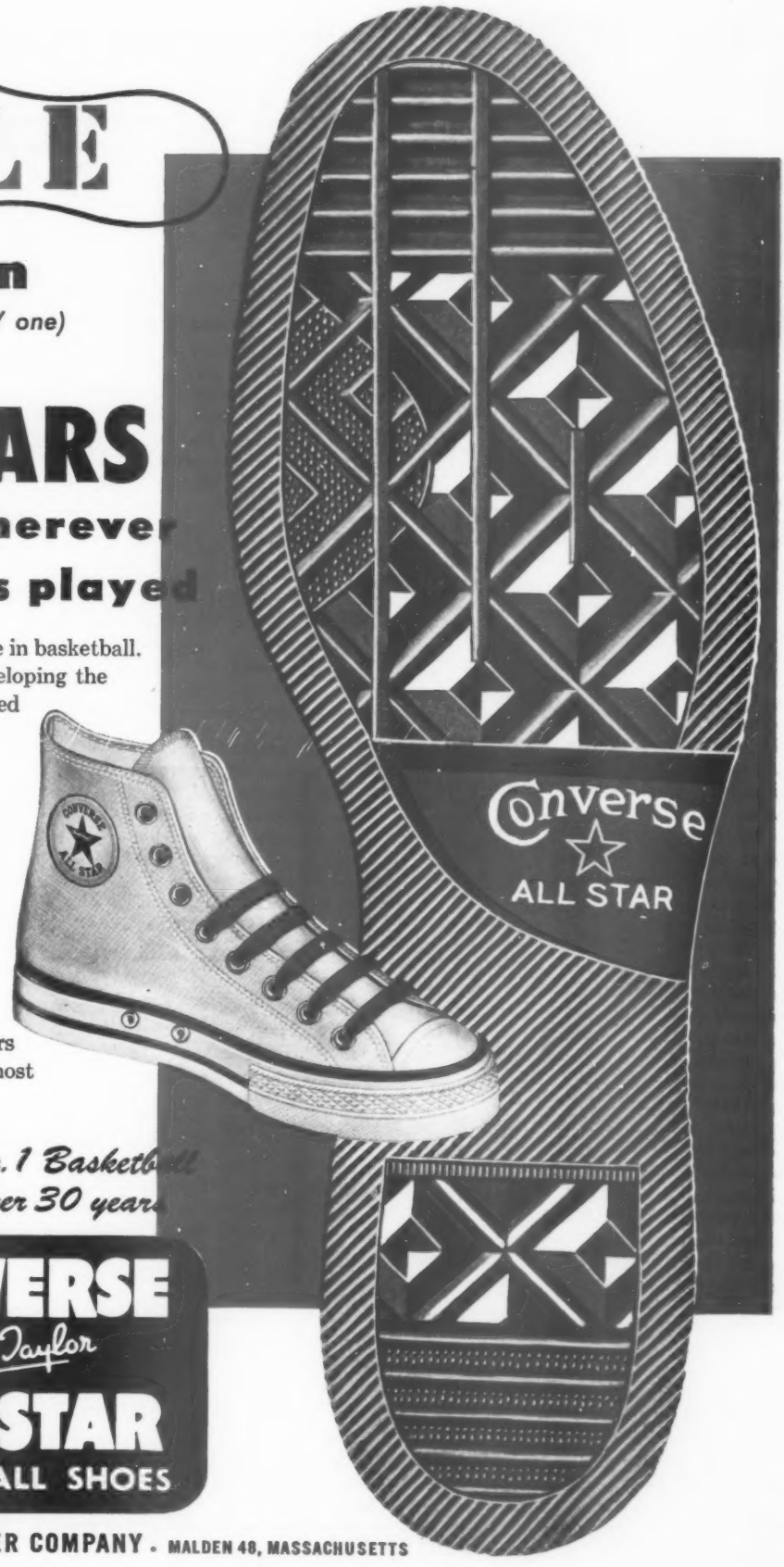

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Elementary Singles Balancing

By JAMES A. BALEY
Gymnastics Coach, Ohio Wesleyan University

IN our most popular sports such as football, basketball, and baseball, a premium is placed upon height and weight. Occasionally, a small boy who has outstanding athletic ability achieves a moderate amount of recognition and receives the benefits which accrue indirectly from this recognition and directly from participation in the activity. However, these boys are the exception rather than the rule. Very often the boy whose heredity dictated that he not exceed 5 feet, 6 inches in height is discouraged from participation by the very fact of his size. The coaching staff itself may not discourage the boy but observation, lack of success, and friendly jibes will.

Further, some boys do not enjoy body contact sports, yet they may display great courage in attempting hazardous gymnastic feats. Boys who show no great love for body contact are not to be condemned. People differ not only as to body type, but also in their likes and dislikes and in their psychological make-up. As educators whose medium is sports activities of a predominantly physical nature, we must realize that while football and wrestling may be excellent tools to achieve educational objectives with some boys, they will not be the best tools for other boys. Stone can be shaped most effectively with hammer and chisel. Other tools are needed to shape clay, wood or metal. The more tools the physical educator has in his kit, the better prepared he is for his job.

The sports background of the bulk of the men in our profession has been in the team sports; consequently, their coaching emphasis is in these areas. That is as it should be because through coaching the team sports these men are using their time and talents most productively. However, one of the characteristics of a democracy is that minority groups are given consideration along with the other groups. Still another characteristic of a democratic philosophy is that it cherishes the diversity in human constitution and make-up.

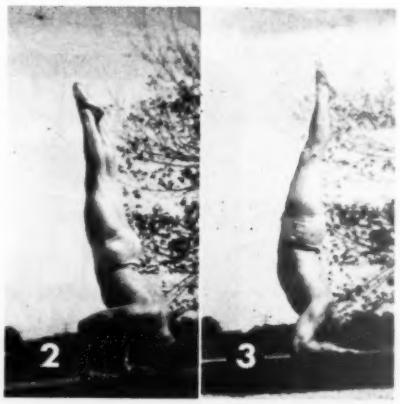
Many of us in endeavoring to do a better teaching job acquire skill in sports which we did not participate in during our high school or college years. When, for various reasons, we cannot acquire the physical skills, we at least acquire the teaching and coaching skills.

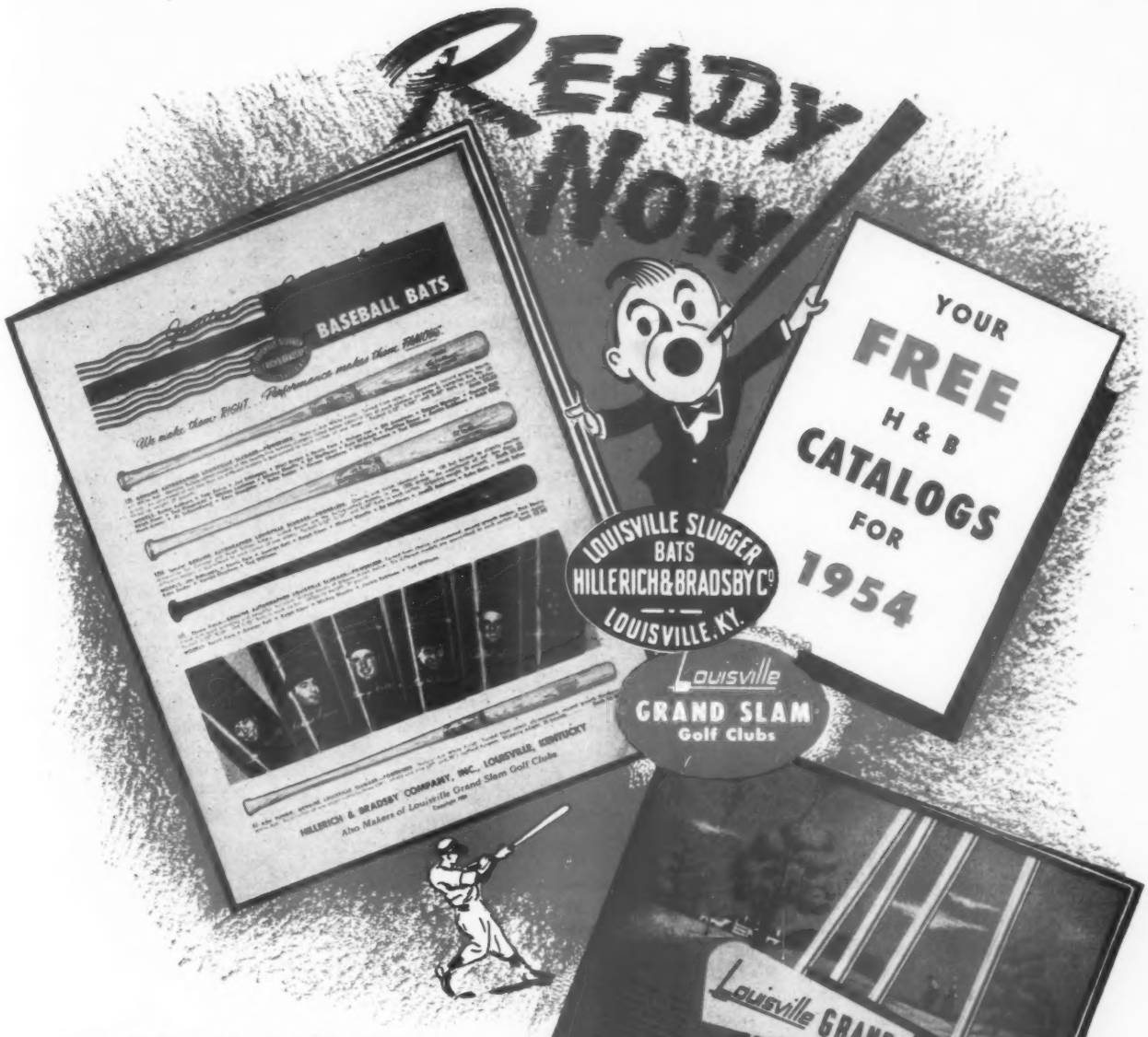
Gymnastics and tumbling is one of the sports activities which can bring satisfaction and pleasure to boys who are not reached through the big men body contact sports. Gymnastics and tumbling should be included in the sports program of every school and college which considers itself as having a well-rounded program. Singles balancing (one of the gymnastic family) is an excellent means of introducing the sport to boys through service classes. This is particularly true for those schools which do not have gymnastic apparatus. It is with the hope of helping to meet these objectives that the description of the following singles balancing stunts is offered.

AFTER graduating from Illinois where he was a member of the famed Gymkana Troupe, James Baley organized and coached the Duke University gym teams. He left Duke in 1949 to complete work for a doctor's degree at Ohio State and since then has been on the staff at Ohio Wesleyan.

Squat Balance. The final position for the squat balance is shown in Illustration 1. A performer assumes position by squatting with his knees spread. The performer's hands are placed on the mat, with his fingers pointing forward directly in front of his feet. His hips are elevated in order to place the inside of his knees just above his elbows. The gymnast's head is held well back as first one toe is raised off the floor and then the other. At all times his forearms should remain perpendicular to the floor. His upper arms should be held at a 45 degree angle to his forearms. This squat balance is fundamental to all balancing stunts. From this position, by lowering his head to the mat, bringing his hips over his head with his legs tucked in, and then extending his legs upward, the performer can easily go into the head balance position. He can also easily press into the handstand position by bringing his hips over his head, while holding his arms in their position, and then extending his legs upward.

Head Balance. This stunt is shown in Illustration 2. One method of getting into the stunt is from a position on the hands and knees. Next, the performer's head is placed on the mat in front of his hands so that his hands and head form an equilateral triangle. Neither his forehead nor the top of his head should be on the mat. If his forehead is on the mat, the curve at the cervical area will be excessive. If the top of his head is on the mat, the balance will be more dif-

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ficult to maintain. The area between the performer's forehead and the top of his head should be in contact with the mat. His hips should next be brought over his head with his legs tucked in and his knees to his chest. Then the performer's legs are extended straight upward to bring his body into a nicely arched position.

A common mistake is for the per-

former to extend his legs outward horizontally and then swing them upward over his head. This procedure makes success less likely for the learner because the circular swing of his extended legs is likely to carry his body beyond the balance point. Under no circumstances should his hands be moved forward to catch the balance. It is suggested that during the learning process a spotter should stand alongside to catch the performer should he overbalance, and to place his body into correct position in order to give him the feel of the balance.

Forearm Balance. Illustration 3 shows this stunt. From a position on his knees the performer places his forearms on the mat at right angles to one another with his palms down. The thumbs and index fingers of both his hands should touch to form a hole in which his head will be placed. Next, his head is placed in this hole. Then his hips are brought up over his head, and his legs are tucked in by springing from both legs. Finally, the performer's legs are extended directly upward to complete the stunt. The final position may also be assumed by springing from one leg while using the other as a pendulum.

Elbow Balance. This stunt is shown in Illustration 4. The performer should get on his knees on the mat. Then he should place his forearms on the mat, palms down, with his fingers spread. His forearms should be almost parallel to one another, with his elbows slightly wider than his hands. He should then extend one leg backward while he draws the other leg under himself with that foot on the mat. He gets into the final position by springing from one leg and swinging the other leg overhead. At all times his head should be held well back. His upper arms should be held in a vertical position during the final position. During the learning process a spotter should stand alongside the performer.

Double Elbow Lever. Illustration 5 shows this stunt. From a position on his knees on the mat the performer should place his hands on the mat outside his knees, with his fingers pointing backward. Then, as he extends his right leg, he should place his right elbow into his abdomen. Next, he will extend his left leg and place his left elbow into his abdomen. The performer's weight will now be resting on his toes and his hands. He will assume the final position by

pulling his legs and trunk upward to bring his body into a nicely arched position.

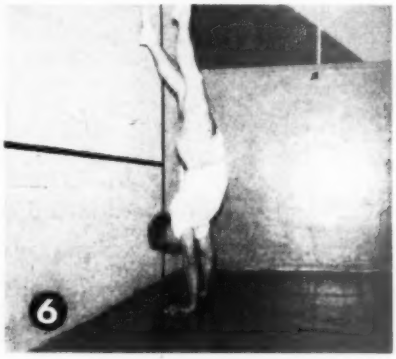
Handstand. This stunt is learned most rapidly against a wall. The procedure is shown in Illustration 6. By using the trial and error method it will take the average student at least one year to learn the handstand. By applying the following principles, he can learn to do a handstand reasonably well in from four to six weeks.

The performer's hands should be placed on the floor shoulder width apart; his fingers should be well spread and pointing forward, and about 18 inches from the wall. Then he upends by springing from one leg and by swinging his other leg, which has been extended to the rear, pendulum-like over his head. Both of his feet should be in contact with the wall after upending.

While swinging his legs up, the performer's shoulders should be carried slightly forward of his hands and his arms should be held straight. However, as the performer's legs approach their position over his head, his shoulders are moved back to a point directly over his hands. This means that as his legs start on their way upward, his arms are inclined forward about 10 degrees but approach the vertical position as his legs move over his head. This movement of his arms and shoulders is barely perceptible but it is essential to success in the stunt.

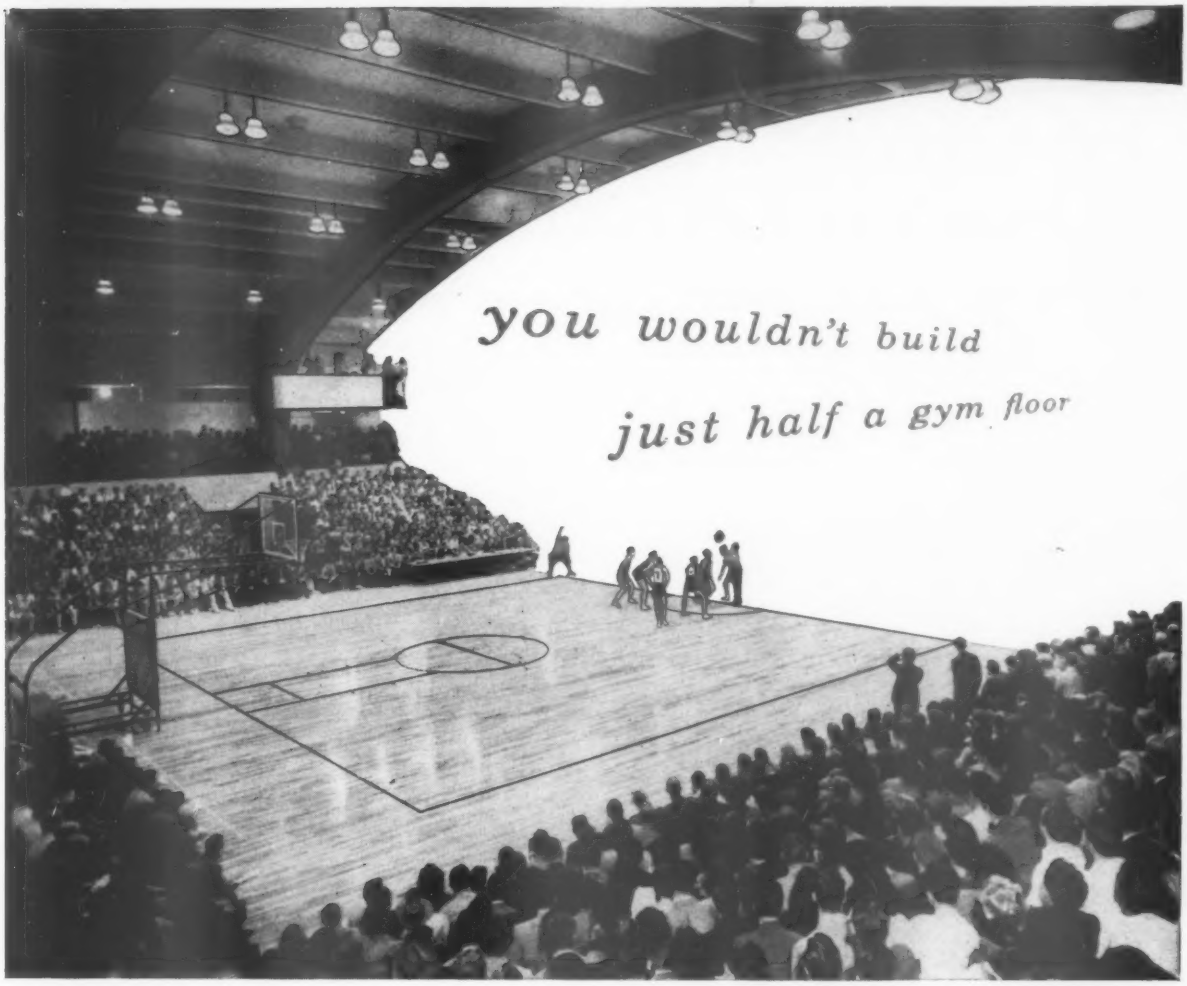
The mechanics which dictate this procedure can be best understood if the performer's body is viewed as a lever with the fulcrum at the shoulders. When his legs are low there is a disproportionate amount of weight on one side of the fulcrum. However, as his legs move over his head this becomes less and less true. The fulcrum must be changed accordingly. At all times his arms should be fully extended and the performer's head pulled well back so that he can look at a spot directly in front of his hands.

To check overbalance, the performer should press with his fingers, pull his head farther back, and extend his legs. To check underbalance, the performer should bring his shoulders forward and bend his arms and legs accordingly. Only repeated practice will tell the performer to what degree and when he should apply these various checks. If the performer overbalances to a point beyond control



(when he is not against the wall) he should pivot on one hand and bend at the waist to come down to his feet. If he underbalances to a point beyond control, he should simply bend at the waist to come to his feet.

Illustration 6 shows the performer with only one foot against the wall. This was done purposely to illustrate the second step in the learning procedure. After correct body mechanics have been learned and the performer begins to feel at home in the inverted position, he can pull one foot away from the wall and then the other, until he finds the exact balance point.



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(Continued from page 30)

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(Continued on page 47)

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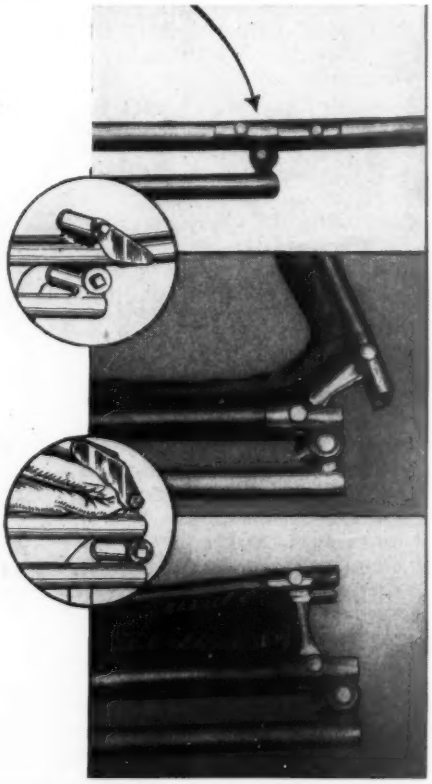

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Teach Them How to Turn

(Continued from page 22)

hold on to the scum gutter with his left hand, place his feet high upon the wall, while his right hand is extended forward pointing toward the opposite side of the pool. His head is in line with his spine and it is important that his buttocks be in close to the wall in order that the large muscles of his thigh may assist in the push-off.

The next step is the actual push and glide and there are two important factors which must be stressed. First, the initial movement is one that must be completed before starting another. This first movement consists of the swimmer taking his hand from the scum gutter and placing it next to his outstretched hand, by either slipping his arm under the surface of the water or lifting it out of the water and dropping it over his head. Simultaneously, his body sinks completely under the water with the swimmer trying to keep his body as close to the wall as possible. A drill which has the swimmer assume the correct starting position plus dropping down under the water will give him practice in learning this important phase of turning. When the swimmer has mastered this simple drill he is ready to be taught the second important step of the push and glide.

When pushing from the side, the swimmer is instructed to give a thrust with his legs by straightening out his knees. His arms are extended fully and his head is tucked between his arms. His legs should be held together and his body should be stretched out from his finger tips to his toes during the glide. This postion is held until the glide diminishes and the swimmer's feet start to drop. The drill should be repeated until the swimmer learns to drop under the water completely and then push from the wall. At this time it is important to stress again the point that the student must learn there are actually two separate movements involved: (1) dropping his body beneath the surface; and (2) pushing from the side. The error of wanting to push before the body is submerged is a very common one and should be discouraged since it will allow the swimmer's body to push off on top of the water, decreasing the efficiency of the glide tremendously. This skill may be practiced by having the swimmer hold on to the side with first his left and then his right hand so that he can learn to assume the correct position with either hand.

2. *Gliding into the wall and assuming a starting position*: When the first part of the progression has been mastered we start to teach a drill which is very like the actual turn. We have the student glide into the wall and practice assuming the starting position. The class is lined up about a body's length from the wall with instructions to push from the bottom of the pool, grab the gutter rail with either the left or right hand, sweep the feet in under the body, and assume the original starting position.

In order to give the class practice in turning in both directions, the instructor can call out the hand he wants the students to use as they glide in to the side of the pool. At this point the class is told that the body turns away from the hand which touches the wall; that is, if the left hand touches the wall, the body is turned to the right. If the right hand touches, the body is turned to the left. We can take advantage of this simple exercise to learn an additional skill by showing the class the method of taking a breath on the turn. The swimmer should be asked to lower his face into the water as he pushes from the bottom. As his hand takes hold of the gutter rail and his feet swing in under his body to get into the original starting position, he is instructed to raise his head out of the water and inhale. We can also go a step farther by having him glide into the wall with his head down, lift his head out of the water as the starting position is assumed, and immediately drop down under the surface as we did in our first exercise. This drill should be practiced until the act of gliding, turning, inhaling, and dropping down under the water can be performed in one easy, relaxed, uninterrupted motion. When this is accomplished we are ready to go on to the third progression.

3. *Kicking into the wall, turning and pushing off*: In all types of turns the swimmer's legs should continue with their drive until his hand touches the wall. Keeping this fact in mind, we can set up a drill to help impress this point on the class. The group should move out about 10 feet from the side of the pool, then push from the bottom with their hands directly overhead, and while in this position kick to the side of the

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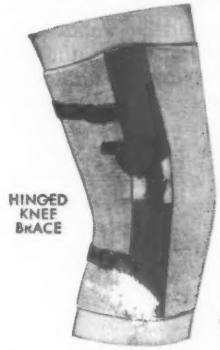

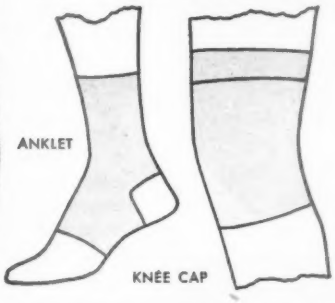

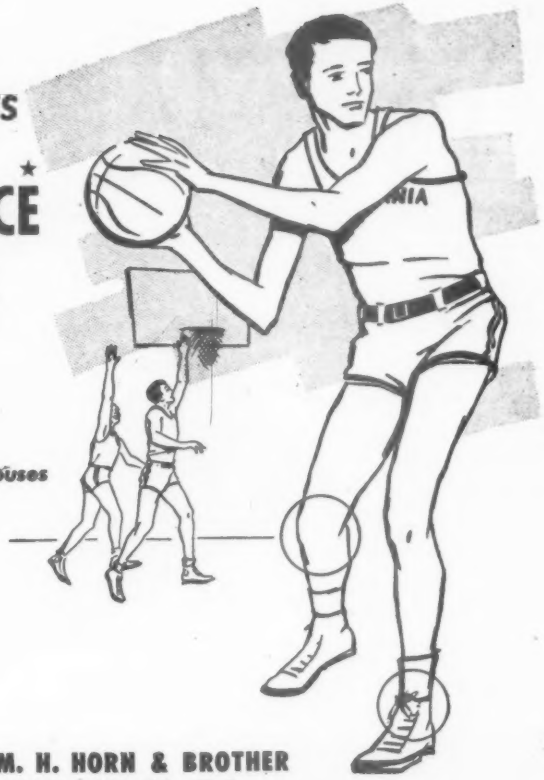

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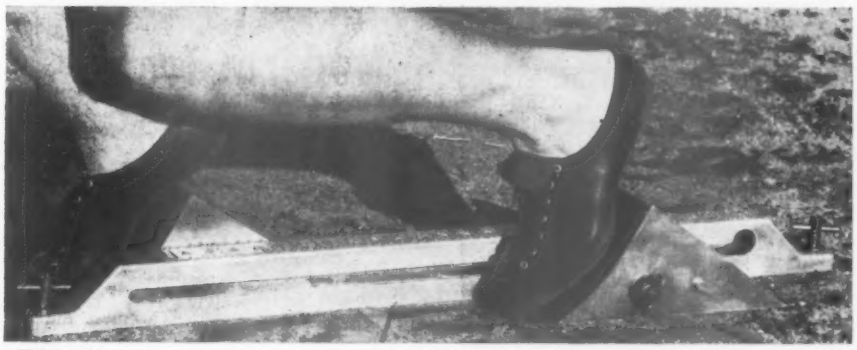

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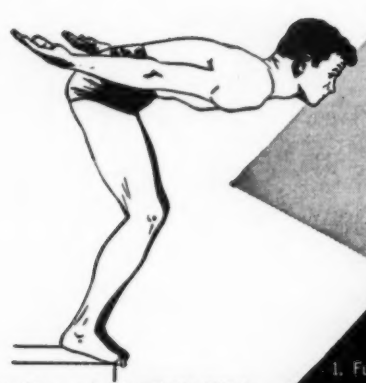

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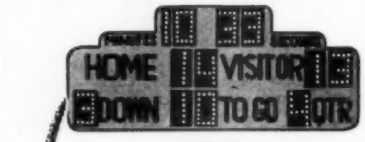

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pool. As soon as the swimmer's hands touch the wall the kick is stopped, his legs are swung in under his body, and his feet are placed high on the wall. The process of lifting the head from the water in order to inhale, dropping the body under the water, and the push from the side of the pool follows in that order. We also add another factor in correct pushing from the side by instructing the swimmer to push off the wall so that his body approaches the surface on an angle and to begin the leg kick again as soon as his glide slows down. As the swimmer kicks to the surface he is now in the swimming position and ready to resume. In drilling en masse it is important that the instructor call out the hand he wants the class to use for turning. Thus, the student avoids favoring the hand with which he has the most success in making a turn.

4. *The complete swimming turn*: The class has been thoroughly drilled in all the progressions and is now ready to make a complete swimming turn. One thing remains and that is the actual resumption of the swimming stroke without a break in rhythm. The class knows that when the glide starts to diminish it is time to resume kicking. When the swimmer's body is about to break the surface of the water he should start the arm stroke, using the arm on the breathing side so that he comes to the surface in a slow, easy motion. At the same time he should take in a breath of air. This process of pushing, kicking, stroking, and breathing should enable him to resume stroking without a loss of rhythm. With this new skill in mind the class is lined up about 15 feet from the side of the pool, told to push from the bottom of the pool, and to start to swim the crawl stroke into the wall. They should now be able to perform the complete turn, using either hand, and all that remains is for the instructor to correct individual faults.

We sincerely believe that teaching the swimming turn in our classes is going to make swimming a much more enjoyable activity for the students. We are all guilty of neglecting this aquatic skill in favor of spending more time on the various strokes, and many times as we watch our classes turning clumsily as they swim back and forth across the pool we think, "We ought to take time out and show them how to turn." Somehow we are always engrossed in improving swimming technique and the associated skills, such as turning, are laid aside to wait for another day.

Track Team

(Continued from page 42)

be convinced that he has within himself a little reservoir of reserve strength which makes him a little better than he thinks he is. He must supply the mental readiness to achieve what he is now physically able to do.

When a coach watches a runner's form crack wide open in the space of a few strides in any race, he is watching a runner who is mentally unready for that race. His legs, wind, and heart may be as ready as they will ever be, but his mind is not ready. If that runner is out in front in another race run in exactly the same time, he may come in as smooth as silk. There are many practice schedules that will get a boy ready for his physical best, but his mental readiness comes only when he believes in his coach, and believes in himself because he believes in his coach.

Once a boy reaches what appears to be his peak, how long can he be held there? Horse trainers insist that thoroughbreds can be kept at racing peak for not more than four top-notch performances. Our guess is that human beings certainly cannot go beyond that number. We are more inclined to believe that a boy cannot handle more than two or three races which demand his best. For this reason we are opposed to pitting a developing runner against his recognized betters week after week. We want to see our boy receive the experience of extending himself to the limit occasionally, but we do not want his confidence sapped by constant defeats. When common sense tells us that a boy has turned in his best, we do not expect to keep him there for weeks. Our aim is to lead the boy along in such a manner that only once or twice during the season will we be expecting his best and asking for it.

High Hurdlers

(Continued from page 15)

exercises makes them very dangerous. For an athlete to exercise before he is warmed-up, or to overstretch a muscle or tendon at any time, even when warmed-up, may lead to serious injury then or during the workout period later.

At the second meet of the 1952 indoor track season we were observing Dillard and Attlesey, the world's greatest hurdlers, prepare for their first important meeting against each

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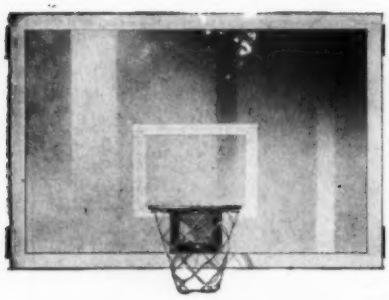

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other. They had warmed-up very cautiously and completely for over 15 minutes, by actual clocking, when Attlesey, in practicing a high leg swing over his head, let one go too fast or too far and overstretched the tendons high in the back of his leg. As a result, he missed the indoor season completely, and never reached his best condition during what had been hoped would be the greatest year of his hurdling career.

Most coaches recommend that actual hurdling practice for beginning hurdlers start with the low hurdles. Others use practice hurdles which make injury unlikely. These vary a great deal. Some coaches have a hinged top bar which flips down easily when it is touched. Others use a rocker method by which the hurdle rocks forward easily. Some coaches place finish yarn or very lightweight sticks at hurdle height. Still others put aluminum, plastic, or tape over both the knee and ankle of the hurdler's trail leg. In any event, detailed instructions should be kept at a minimum until the prospect gets the feel of things. Such preliminary work will provide a better background for understanding when instruction is given.

After this preliminary period of hurdling, the primary problem of both the coach and the athlete is to increase the amount of hurdling that is done. The only way to excellence lies in drill, consistent, persistent, constant drill; the only path to better hurdling is in more hurdling. Ten months of the year devoted to practicing hurdling are not any more physically exhausting than ten months devoted to practicing acrobatic dancing or circus stunts. The endless practice and almost meticulous attention to detail which characterize success in these fields are just as essential to success in hurdling. Further, if an athlete's sense of good form is lost after a short period of practice, this does not indicate the permanent limits of practice. Rather, as in distance running, continued practice will gradually postpone the effects of fatigue so that not only better but more work can be done.

Practice in sprinting will become a part of almost every workout and may sometimes comprise the entire day's activity. Emphasis on sprinting is all too often neglected. As previously stated, the ability to run fast is just as crucial in hurdling as it is in the sprints themselves and constant drill in sprinting is equally essential to success. Speed can be greatly improved through practice.

What Kind of Turf?

(Continued from page 16)

serious problem, crabgrass seedlings would receive better distribution than nature can give. And if it is used during the playing season to overcome the evils of rolling, the groundskeeper must drag and roll to close up these holes before the players come on the field. It may sound hazardous to punch a football field full of holes four inches deep during a playing season, but it has been done.

At West Point we aerate our fields as soon as we can get on them in the spring, in late June, in late August, just before winter, and when necessary to overcome the hardening effect of the roller. Neglect of aeration will produce a sickly grass just able to exist in lifeless soil.

—One of our maintenance men said, as he unhitched the aerating machine from a tractor at the end of a day's work, "This would be a great business if it were not for athletes. We fix the turf — they tear it up with their cleats."

Fortunately for our country, young giants, and potential ones, appear in football stadiums across the nation every Saturday afternoon in the fall. On the feet of these muscular young men are tied shoes with seven conical cleats fastened to each sole. These cleats, an excellent device for tearing out sod, pose a real problem for groundskeepers, maintenance men, and athletic directors.

In 1949 we asked a resourceful, practical agronomist from nearby White Plains to study our turf problems. This man, Warren Lafkin, said after a period of close inspection, "How are you going to keep turf in Michie Stadium during the football season when on about nine or ten afternoons, counting scrimmages, you have the sod torn up?"

We knew that re-sodding was not the answer to his question. Sod, at twenty-five cents per square foot, is certainly not a solution. Even if a school were wealthy enough to re-sod when it desired, it would take an optimistic groundskeeper with considerable imagination to insert sod squares in a stadium turf during the football season. Even the most unimaginative groundskeeper can visualize a back changing direction after clearing the line of scrimmage and taking a bad fall when a square of sod kicks out from under him.

Warren Lafkin answered his own question about keeping turf in Michie Stadium in the playing season. He brought to the stadium several "turf-pluggers" – a simple instrument similar to the tool a greenskeeper on a golf course uses to cut a new cup on a green. When a workman places a "turf-plugger" on a piece of sod, steps on the foot-bracket, and turns the handle, a sod-plug four inches in diameter and three to four inches in depth comes out of the top of this simple machine. The same machine is used to prepare the "receptacle hole" in the scuffed area.

"If you want to have good continuous turf," Lafkin pointed out, "you are going to have to build your own sod farm and use these pluggers between games."

We experimented. At first we used a "turf-plugger" which cut a plug eight inches in diameter. The workmen found these tools hard to use and we were afraid that an eight-inch plug would kick out. So four-inch "turf-pluggers" were procured.

We built a sod farm 85 feet by 100 feet. This has proven to be the minimum size if the problem is to be met successfully.

In September of 1950, a year later, we did not think the turf from this new sod farm was tough enough, so we cut bluegrass plugs (228 of them) from the borders of an adjacent athletic field, and placed them in the principal divot holes left after a practice game in Michie Stadium. The field was rolled on Wednesday and again on the Saturday morning of the next practice game. Our employees made small bets with each other as to the number of plugs the players would kick out. Their guesses ranged all the way from five to seventy-five. All hands were impressed to find that not a single four-inch plug had been dislodged from its hole in this game.

During the 1950 football season we cut from the borders of practice fields, 2,488 four-inch plugs of bluegrass turf and transplanted them to badly scuffed areas in Michie Stadium. Six plugs were kicked out by the players. Of course, we filled the holes on the edges of the practice fields with topsoil and seeded them.

During the fall of 1951 we started taking plugs from our sod farm, working between games again to insert these cylinders of turf into worn areas in the stadium. In golf, well-trained players replace the turf. Football players are too busy, so we do it for them. In 1951 we replaced 9,787 divots for our football players, only

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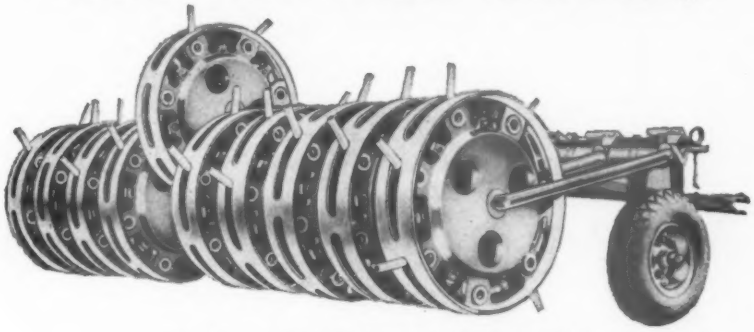

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two of these plugs becoming dislodged in a game. Our workmen were learning how to do the job better.

Since we started in 1950, we have inserted 24,389 four-inch plugs (or the equivalent — some were eight-inch plugs) in the turf of Michie Stadium during the football season.

Thanks to Lafkin's idea, backs in Michie Stadium are running on turf, not on dirt which turns to mud when it rains. Not only is his method giving the Army football team and its opponents a firm, fast, and springy turf, but it is enabling us to keep the stadium field green to the delight of the spectators.

High schools, as well as colleges, which have stadiums used principally for games and not daily practice, can employ this method. A crew of six workmen is a great help, but two Army Athletic Association employees have cut, transported, and transplanted 300 plugs in one day. Place 600 four-inch plugs in the worst scuffed areas on a stadium field and notice the improvement in the appearance of the field. We have been inserting an average of 1,700 plugs between games.

In order to encourage the roots of the plug to form a bond with the existing soil, we place in each hole, before it receives its plug, a commercial preparation. This "take-hold" solution, high in phosphoric acid and also containing potash and nitrogen, stimulates root growth.

Examination of stadium turf after a game will disclose areas where some hard-driving lineman has torn out approximately forty-eight square inches of turf. Three four-inch plugs (37½ square inches) are not enough, so we place a topsoil around the three plugs which contains a seed mixture of perennial rye grass and Kentucky Blue.

We are happy about this method of keeping Michie Stadium's turf in shape during the season. Of course, we augment the plugs of turf by other seedings — a dormant seeding just prior to winter, and another lighter seeding after spring practice — but we have been able to do away with the complete overhaul job we used to perform each year after spring practice.

While the method described has brought unusually fine results to our stadium turf at a needed time, we have not been able to arrive at as satisfactory a solution where a field receives almost constant use the year around.

It appears almost impossible to keep such a field at a high standard of

RUSSELL REEDER captained the West Point baseball team in 1926 and two years later, while stationed at Fort Benning, prepared an article for us on batting. In 1929 he returned to West Point as assistant football coach, a position he held until 1937. Severely wounded in the Normandy invasion, he returned to West Point to coach the plebe baseball team until last year when he retired from the army with the rank of colonel. He is now employed as assistant graduate manager of athletics at his alma mater.

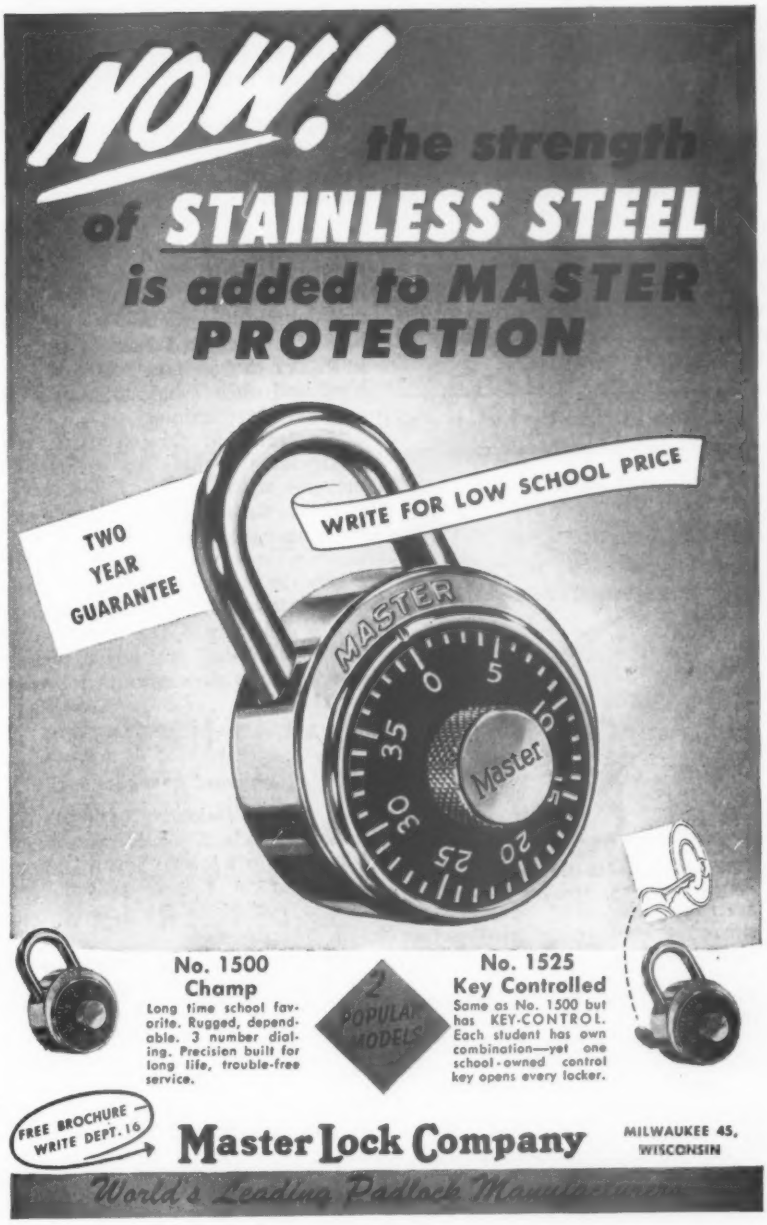
maintenance when it receives almost daily use until the snow flies and again when the robins appear in the spring.

Dormant seeding is a help. We have seeded in December on top of a two-inch snow, but this is not desirable. It is obviously better to have the seed drop into a tine hole made by the aerating machine or into the bite of a spiked-disc. Our best dormant seeding results have been obtained when we have aerated thoroughly, following this with the spiked disc, then seeding, dragging, and light rolling.

If the average school or college had enough fields so play could be rotated, turf could be given a chance to recover and newly-seeded areas would have opportunity to grow into established sod.

Agronomists tell us in order to germinate seed we must keep it moistened until it has a start, and they caution against the evils of overwatering after the grass is established. This is a well-known and accepted practice. Dr. O. J. Noer, the noted and extremely helpful agronomist of The Milwaukee Sewerage Commission, has impressed upon us if we over-water we will obtain shallow-rooted turf. However, there comes a time when the groundskeeper says to himself, "I'm through growing grass now. I'm preparing this field for play by those boys with the cleats. I've got to put enough water into this soil so it will be heavier and not kick out."

Both Dr. Noer and the groundskeeper are right. We want the groundskeeper to maintain and prepare the field properly. He has to water carefully in the playing season, especially on bare areas, in order to avoid having mud for practice. It is much easier on our nerves when the field is watered smartly.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Plus-Minus Chart

(Continued from page 32)

they lost possession of the ball and see how their mistakes prevented our team from taking shots at the basket.

From this chart another chart is compiled which contains individual game records and the season's up-to-date totals (Chart 2). Such information as personal fouls and free throws attempted and made are obtained from the scorebook.

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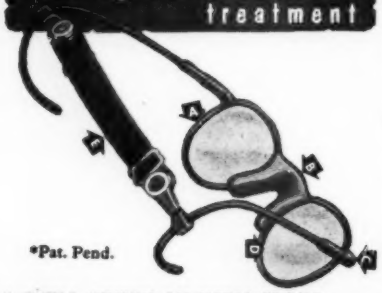

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With the use of these statistics we attempted to reduce the number of times our team lost possession of the ball. Using the four most numerous losses, we found that for the first half of a twenty-game schedule, we lost the ball by traveling a total of 33 times; bad passes, 89; fumbles, 55; and through held balls, 50 times. Needless to say, we concentrated on these violations and ball-handling errors for the remainder of the season and comparable figures for the latter half of the season found 24 traveling losses, 77 due to bad passes, 43 fumbles, and only 7 held ball losses for noticeable reductions.

We feel that these statistics definitely have a place in basketball if they are used wisely. They serve as a check as to whether a player is showing improvement in his game or is going downhill. It is easier to show a boy the record of his performance and make him believe the results than it is to tell him. The boys find this chart interesting and strive to better their records throughout the season.

Track

(Continued from page 26)

(30) North Dakota 8½; (31) Kentucky 8; (32) New Mexico 6; (33) West Virginia 5; (34) South Dakota 4; (35) Georgia 1 5/6; (36) Alabama 1½; (37) Mississippi 1; (38) Wyoming 1/3.

Alabama was a newcomer to the list this year and Georgia scored for the first time since the first meet. Florida showed the greatest improvement, moving from 28th to 23rd place. Oddly, Minnesota and Nebraska maintained their tie of a year ago, each registering six points this year.

The Top Ten

Each year we have listed an honor roll of the "top ten." Until this year three states, California, Ohio, and Texas had always finished in the charmed group. This year's meet saw Ohio skid from second place last year to 23rd place this year. New York continues to edge out neighboring New Jersey. Last year's corrected totals showed New Jersey trailing New York by six points. This year the margin is reduced to one point although neither state had as high a total as last year.

In the 1948 meet Massachusetts finished eighth and that was her only previous appearance among the leaders. Her surprising 30 points this year earns a very strong fifth spot for her. Pennsylvania, who dropped out of the "top ten" last year, is back this year with a sixth place finish. Oklahoma dropped from 3rd to 7th place.

Florida, whose previous highest finish was her 17th place of last year moves into eighth place. Michigan is another newcomer to the "top ten," her previous high being eight points for 14th place in the 1951 meet. Indiana dropped out of the "top ten" in the 1951 meet and returned last year. Her total of 12 points is good enough to hold on to tenth place and to complete the select group.

Of the 38 states which have scored in the meet, 24 have been in the "top ten." Following are the states with the number of times shown in parentheses: California (8); Texas (8); Indiana (7). Ohio (7); Illinois (6); New Jersey (5); New York (5); Pennsylvania (5); Iowa (4); Oklahoma (4); Wisconsin (4); Oregon (3); Massachusetts (2); Missouri (2); Washington (2); and once each for the balance comprised of Arizona, Colorado, Connecticut, Florida, Kansas, Louisiana, Michigan, Tennessee and Virginia.

Another feature of the meet each year has been a grouping of the states into sections and striking an average. The sectional averages are as follows: Pacific (33.6); Middle Atlantic (29.1); West South Central (21.0); East North Central (7.6); New England (5.0); West North Central (3.9); South Atlantic (2.2); Mountain (1.9); and East South Central (0.3).

The accompanying table shows the sectional averages for 1947 and 1948 in the first column, the sectional averages for 1952 and 1953 in the second column, and the sectional averages for this year's meet in the third column. A study of this table indicates three important trends. First, is the very rapid rise of the Middle Atlantic states. The three states New York, New Jersey, and Pennsylvania which comprise

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this section finished third, fourth and sixth in this year's meet. This section is approaching the point where it is a serious contender for the honors held by the Pacific Coast since the inception of this meet eight years ago.

	'47-'48	'52-'53	1954
Pacific	30.1	35.2	33.6
M. Atl.	13.3	19.9	29.1
W. Sou. Cen.	14.2	17.5	21.0
New Eng.	3.3	2.9	5.0
E. No. Cen.	25.8	15.9	7.6
Mt.	2.7	3.0	1.9
W. No. Cen.	8.5	7.8	3.9
So. Atl.	1.1	0.7	2.2
E. Sou. Cen.	1.1	1.8	0.3

Second, while not as spectacular as the rise of the Middle Atlantic states; nevertheless, the upward trend of the West South Central section is noteworthy. The rate of improvement, when charted, forms almost a perfect straight line.

The third trend worthy of mention is the very pronounced decline of the states in the generally accepted area of the Middle West. This area comprises the East North Central and West North Central sections. The steady progression downward of the East North Central section should serve as a warning to that once proud track citadel.

This meet also affords an opportunity to study individual events. From the accompanying table it will be noted that there is a steady improvement in almost all evènts, with the improvement most pronounced in the field events. Among the notable improvements in the running events are the high hurdles and mile run. The 180-yard low hurdles are not compared in the table because only recently has this distance become recognized as the accepted distance for the low hurdle event.

Event	'47-'51	'52-'53	1954
High Hurdles	15:32	15:29	15:19
100-Yard Dash	10:20	10:16	10:12
Mile Run	4:39.01	4:38.21	4:37.69
880 Relay	1:33.65	1:33.84	1:33.82
440-Yard Run	52.15	51.57	51.97
880-Yard Run	2:02.1	2:02.0	2:03.0
220-Yard Run	22.56	22.44	22.46
Pole Vault	11-5½	11-6	11-6
Shot Put	48-5	50-8½	51-3
High Jump	5-8 1/6	5-11	5-11½
Discus	140-4⅝	144-4	145-3
Broad Jump	21-4¾	21-5½	21-7

Also, accompanying the meet, it is our privilege to present the National High School Honor Roll as compiled by Mr. E. A. Thomas for the National Federation. The outstanding times of Texas in the two dashes is not recorded on the honor roll because of favoring winds. Although California continues to dominate the honor roll, the domination is not as complete as it was a year ago when 64 of the 125 names on the honor

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roll were from California. This year California has 45 of 133 listings. At the beginning of this article it was mentioned that the pendulum of track power was continuing to swing toward the East. This trend is further borne out by the fact that a year ago 8 per cent of the honor roll listings were from states bordering the Atlantic seaboard. Today, the figure has risen to 19.5 per cent.

Lacrosse

(Continued from page 10)

stick directly in the path of the ball (Series E and Series F). The stick will give when the ball hits. There should be a slight twisting inward of the player's wrists in order to keep the ball in the stick. The next thing to be considered in catching the ball is toward which side of the body is the ball coming. At all times the face of the stick must be placed in the path of the ball, and the stick must give slightly and be cradled inward. When the pass is to the left side of a right-handed player, he should move his right hand in a circular horizontal plane to the left side. A pass coming directly to the face of a player (Series F) requires him to drop his left shoulder and head to the left as the ball reaches the stick. At the same time he must be carrying out the other fundamentals.

The last fundamental to be covered is scooping (Series G). Scooping takes place when the ball on the ground is being picked up. When a right-handed player approaches the ball, he bends his body at the waist, bends his knees slightly, and takes a firm grip on the stick with both hands. His left hand should remain at the extreme end of the handle at his left side. His right hand is dropped, holding the stick with the top near the back, and his knees should be bent. There should be a slight shovel motion in scooping the ball off the ground. The player must be sure to keep his left hand at the extreme end of the handle to avoid jamming the stick into his body. By showing as little as possible of his stick to any opponent who would be chasing him, the player would not expose the end and have the ball checked out of the stick.

This article has covered the fundamentals of stick handling. However, it should be remembered that there are numerous other aspects of this challenging sport. We hope the material presented will be sufficient to arouse the interest of high school and college officials.

Competition for Children?

(Continued from page 20)

to develop future teams is doubtful; for the disparities of growth are tricky ones, and the little unimpressive boy in the seventh grade may suddenly spurt in growth and be an outstanding reality in the tenth grade."

However, Dr. Oberteuffer says in a recent issue of the "Ohio High School Athlete:" "The principal purpose of competitive football in grades four through nine is to provide experience and material for varsity teams."

Dr. Mitchell, on the other hand, says: "And finally it should be remembered that the present junior high school trend has not been demonstrated to pay off in winning senior high school teams. There are many instances of high school state championships being won by cities which do not promote junior high school varsities. These school systems have placed their educational emphasis on all-school athletic participation rather than on a small group of selected players as yet too young for rigorous training and specialization."

These two gentlemen agree in their opposition to competitive athletics for junior high schools yet differ widely as it will be noted in some of their reasoning. Dr. Mitchell feels that sports should not be highly organized for young children. He said: "The old traditional game of "Choose Up" or "Rotation" in baseball had more empirical science in it than the current practice in early teen athletics today. The boys did what they wanted to do. They wanted to try themselves out in the exciting position of pitcher or catcher as well as that of the remote right fielder. Left to themselves, they reduced their sports to their age and their needs. Today we are interfering with that process."

However, on May 25-26, a National Conference on Program Planning in Games and Sports for Boys and Girls of Elementary School Age was held in Washington, D. C. This conference urged that the children should not be left to themselves to plan their programs but should have even greater supervision. One of the recommendations of the committee is: "Education and recreation authorities and other community youth-serving agencies have a definite responsibility for the development of adequate neighborhood and community programs of games and sports and to provide leadership for them."

As we look back over this editorial we note that the gentlemen who have been quoted are all outstanding authorities in their fields. In many cases their views are diametrically opposed. In any issue of importance a divergence of views will be found and this is as it should be.

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Costs less . . . now and later—You pay less initially and far less in replacements for the ball that's straight-shooting, true-balanced, stays 100% playable seasons longer. Sanctioned by NCAA and NFSHSAA.

Features—more of them—(1) KOLITE COVER: waterproof, scuff-proof, more rugged than ordinary rubber. The "feel" of fine leather, but longer-wearing. (2) 100% SPECIALLY PROCESSED NYLON WINDING: an exclusive with Seamless. Multiple tear-proof layers increase ball life under toughest treatment. (3) BUTYL BLADDER: practically eliminates re-inflating. (4) PATENTED KANTLEEK VALVE: securely molded into bladder, prevents air leaks.

Priced right—Your guarantee: top quality at lower initial cost, and a big dividend in extra years of perfect play. Order today. Prices are right, quality *outstanding.* Soccer, volley and footballs, too.

We will meet you in Room 639-40 at the N.S.G.A. Show in Chicago.

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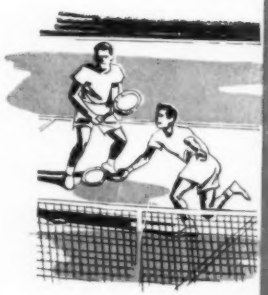

We appreciate the continued confidence of the thousands of coaches and athletic directors who have made 1953 our best year ever.

★

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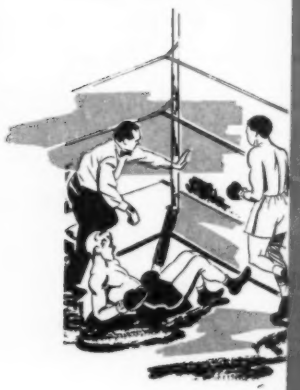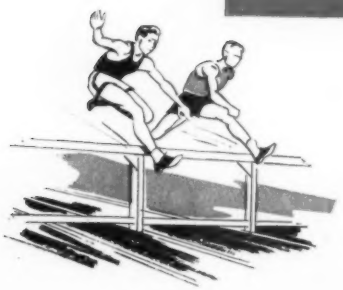
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